DEC 6 1926

PAPER TRADE JOURNAL

Reg. U. S. Pat. Off.

Vol. LXXXIII, No. 23 DECEMBER 2, 1926 Per annum, $4.00 Per copy, 10 cents

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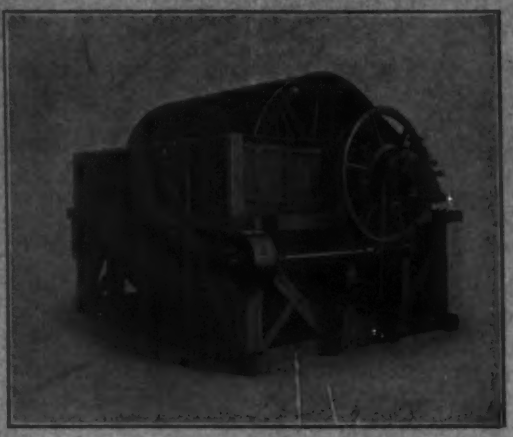

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PAPER TRADE JOURNAL

ESTABLISHED 1872

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD

FIFTY-FIFTH YEAR

Published Every Thursday by the

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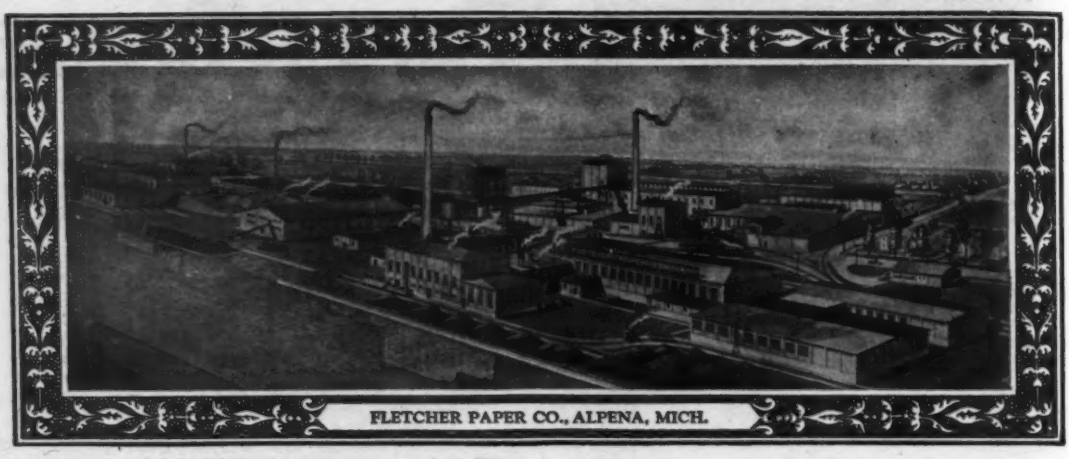

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PAPER TRADE JOURNAL

With Which Is Combined

PAPER

Vol. LXXXIII, No. 23 — Thursday, December 2, 1926

The Magazine of the Paper Industry

Gatineau River Regulation Plans Completed

Object of Work Decided Upon by Quebec Streams Commission is to Distribute Power Uniformly Throughout River Where International Paper Co. Development is Proceeding—Enterprise to Cost Approximately $6,000,000—Erection of Paper Mill at Hull, Que., to Probably Begin Next Spring

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., November 30, 1926.—In line with its policy for the conservation of water for power purposes, the Quebec Streams Commission, a Provincial Government body, has agreed on the final plans for completing the regulation of the Gatineau river at Lake Baskatong. It is understood that when completed the cost of the enterprise will be $6,000,000 or so. It is on this river that the International Paper Company is proceeding with a big power development, and the object of the work now decided upon is to regulate the flow of the river so that power will be more uniformly distributed throughout the year. When the lake is used as a reservoir it will have a capacity exceeding 80 billion cubic feet. Another decision arrived at by the Streams Commission is to start early next spring on the construction of a reservoir at Lake Makinac, in the upper St. Maurice. It is expected that the cost of this enterprise will be about $1,500,000.

Among the other large reservoirs constructed by the Quebec Government are the Gonin reservoir on the St. Maurice river which has a capacity of 160 billion cubic feet and cost $2,500,000; the Taschereau reservoir at Lake Kenogami, with a capacity of 12 billion cubic feet; and the three reservoirs on the Manouane river, a tributary of the St. Maurice, with a capacity of 16 billion cubic feet.

$4,000,000 Paper Mill for Hull

The large paper mill, costing in the vicinity of $4,000,000, which it was recently intimated would be erected by Nesbitt, Thompson & Co., Ltd., of Montreal, on the Fraser property, between Deschenes and Aylmer, on the Quebec side of the Ottawa river near Ottawa, is now a "certainty," according to the Ottawa Journal. The paper states that officials of the South Hull municipality with whom representatives of the company have been negotiating, have declared that a matter of tax commutation has been straightened out, and erection of the mill will probably start next spring. The plant is expected to employ 200 hands.

New Mill on Peribonka River

During the past week a group of Canadian financiers, including the Wood Gundy Port-Alfred interests, accompanied by Vice-president W. D. Robb, of the Canadian National Railways, have been visiting Peribonka, in the Lake St. John district, where the Port Alfred Company possesses rights on an area of 1,500 square miles of timber limits, with the object of deciding on the advisability of erecting a pulp and paper mill on the Peribonka river. The plans provide for the harnessing of a series of waterfalls to supplement the supply of power available from the Chute à Caron and Grand Decharge power reserve. The need of a railway is being urged by the interests represented, most likely the projected Chougamou railway, the construction of which is practically decided upon, and will be rendered possible through legislation at the next session of the Legislature. The railway extension, as far as the development of the Peribonka district is concerned, would be about 50 miles, going from St. Felicien.

Canada Paper Co. Absorbed

Another step in the merger plans of the St. Maurice Valley Corporation has been announced. The Corporation has arranged to absorb the Canada Paper Company, which has its head office at Windsor Mills, Que., and manufactures news, manilas, colors and book paper (capacity 140,000 lbs. per day). The company also has a ground wood mill with a capacity of 120,000 lbs. per day and a soda fiber mill with a capacity of 60,000 lbs.

In connection with this plan a special general meeting of shareholders of St. Maurice Valley Corporation has been called for December 14 at 2:30 p.m., in Montreal, for the purpose of approving of a by-law to increase the common stock of the company from 150,000 shares to 500,000 shares, by the addition of 350,000 shares of no-par value.

The present capitalization of Canada Paper Company is as follows: Bonds, $2,000,000; preferred stock, $1,250,000, and 20,000 shares of no-par value common stock. Besides the mill at Windsor Mills, the company controls Kilgour Bros., who have a paper bag plant at Toronto and a paper warehouse. Some time ago new interests became connected with Canada Paper Company and, acccording to the latest report available, the directorate is fairly closely associated with St. Maurice Valley Corporation interests, the personnel being as follows: President, J. H. Gundy; vice-president and general manager, F. J. Campbell; A. J. Nesbitt, Sir Montagu Allan, Sir Herbert Holt, C. R. Hosmer, F. W. Molson, W. E. Wilder, and H. Balm.

The St. Maurice Valley Corporation was incorporated last year and acquired the properties of St. Maurice Paper Company and also holds the Belgo-Canadian Paper Company through holdings of almost the entire common stock. Sir Herbert Holt is president. The capitalization includes first mortgage bonds of $7,566,500; debenture stock of $2,433,333; preferred stock of $8,000,000 and 150,000 shares no-par common.

British Financing Only

Neither Canadian nor American investors will be given an opportunity of participating in the Anglo-Canadian Paper Mills,

(*Continued on page 34*)

Demand for Paper Slower Than Usual in Chicago

Annual Service Football Game Practically Brought Business to a Standstill During Past Week —Action on Thousand Sheet Ream Question Delayed—Increased Postal Rates Affect Paper Request for Direct Mail Advertising—Kraft Mills Continue Busy

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., November 27, 1926.—Chicago and the Middle West has been busy all week entertaining and getting ready to entertain the Army mule and the Navy goat who played their annual service football game in this city Saturday. What business there was in the paper trade came to a standstill along with the other mercenary pursuits of the city. In the executive offices of every paper dealer the question was not "How is the paper business?" but "Who is going to win the game?" Many out of town paper merchants were in the city, not to buy or sell, but to see the most talked of football battle in the history of the game.

W. N. Gillette Campaigning

W. N. Gillette of the Chicago Paper Company, and vice-president of the National Paper Trade Association, has been out of town the greater part of the week and his interests have been largely devoted to arousing definite action on the decision to supplant the 500 sheet unit with the 1000 sheet ream. A hesitancy on the part of several fine paper dealers, not particularly in the Chigaco district, to take this step is believed to be a partial reason for the delay. Fine paper dealers who also deal in the coarser grades of paper are the ones that are in some doubt as to the wisdom of such a move although they would like to see the new unit go through. In competition with coarse paper jobbers that would be able to under sell if the unit was affected, fine paper dealers would not be able to take care of their complete lines on the new scale.

Business Conditions Dull

Many of the large Chicago paper houses report that business is even slower than the present season merits. They state that there is a dearth of big orders that usually characterize the market even at this time of the year and that they can find no apparent reason for such a condition. There is a general supposition, however, that advertisers have decreased direct mail advertising methods in favor of publication advertising due to the fact that the government issued a change in postal rates that affected the present year. This increase in postal rates has made the mailing costs prohibitive enough to cause a decided trend toward magazine advertising as a money saver.

Kraft Market Very Firm

The kraft market is good and very firm. The Seibert Paper Company reports that the northern mills are busy and that the southern markets are very strong. Mills have business lined up until the first of February. The mills are considering a differential on sheets of kraft of $5.00 a ton on over rolls. The northern mills have already started this policy and the southern mills are ready to follow suit. Kraft paper houses believe that this differential will eventually affect all wrapping papers.

Chicago Shippers Conference Changes

Roy W. Campbell of the Butler Paper Company, until recently president of the Chicago Shippers Conference, has now been appointed a director to act for a term of three years. E. M. Antrim, traffic manager for the Chicago Tribune, will be the other director. H. D. Pixley, traffic manager of Carson, Pirie, Scott & Co., great Chicago wholesale & retail firm, will take Mr. Campbell's place as president of the organization.

Donald R. Kimbark's New Appointment

An announcement of interest to the trade is the addition of Donald R. Kimbark to the sales personnel of Bradner, Smith & Co., Chicago wholesale paper dealers.

Mr. Kimbark is the son of Eugene U. Kimbark, founder and former vice-president and general manager of the Paper Mills Company, and was himself associated with that organization for fifteen years.

He is a World War veteran and saw service for 23 months. With a taste for adventure he resigned his position several months ago and spent some time prospecting in the new gold field in the northern province of Quebec.

Mr. Kimbark has a wide knowledge of fine printing and a keen interest in the selection of suitable papers for every given job. He is known as one of the few paper men whose interest in paper extends clear down the line from the inception of an idea to the completed work.

M. D. McAlpin Seriously Ill

M. D. McAlpin, vice-president of Bradner, Smith & Co., is seriously ill. Mr. McAlpin was operated on last Tuesday and has not yet regained consciousness. The turbinates in his head had given him great pain for some time and an operation was resorted to in an effort to remove them. Mr. McAlpin's serious condition comes as a blow to a large number of paper dealers who have a long and happy acquaintance with "Mac," as he is affectionately called by those that know him.

George Rochelieu Accidently Killed

The holiday Army-Navy crowd of paper dealers received a genuine shock with the news that George Rochelieu of the Protecto Paper Company had fallen down an elevator shaft Friday and was instantly killed. No particulars are known about the accident at this time. Mr. Rochelieu was well known to paper dealers in Chicago and surrounding district.

Messinger Booklet Distributed

The Messinger Paper Company, widely known Chicago house whose specialty is paper for every advertising and commercial purpose, has recently distributed its annual price list booklet to its customers. This compact 68 page list contains prices on every line and also includes a special listing of 28 lines which the company has added during the year.

New Quarters for Empire Paper Co.

[FROM OUR REGULAR CORRESPONDENT]

WICHITA FALLS, Tex., November 15, 1926.—The Empire Paper Company have moved into their new building at 202 Barwise street, Wichita Falls, Tex. Their new home is a two story brick structure with cement basement, the first floor being used as a shipping and receiving room, and the printing equipment also is installed there. The second floor is for offices, sample rooms, etc., and the majority of the stock is carried in the basement.

The new building has approximately 15,000 square feet of floor space, and the building is equipped with a railroad siding so as to facilitate the unloading of carloads of merchandise.

The company will carry on a general coarse paper jobbing business, including many lines of specialties. L. H. Estes is president and general manager, George W. Gutzman, vice president, and C. H. Gannon, secretary-treasurer.

The company was organized on July 1, and occupied temporary quarters at 909 Ninth street, Wichita Falls, pending the completion of their new building.

Paper and Pulp Output Increases in Wisconsin

News Print Constitutes One-Third of Production—Wrapping Paper is Expanding in Volume —Wall Board is Gaining in Importance—New Warehouse Completed at Neenah for Bergstrom Paper Co.—Moloch Foundry & Machine Co. Reorganized

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., November 27, 1926.—With the installation of elevators and other handling machinery, the large new warehouse of the Bergstrom Paper Company on Main street, Neenah, Wis., will be completed. Growth of production in the book and magazine paper field made the enlargement necessary.

Storage facilities sufficient for some time to come are provided in this new structure of brick, concrete and steel. The building is six stories in height, has a street frontage of 80 feet and a depth of 160 feet.

Rapid Crouche Dam Completed

The Rapid Crouche dam, which supplies power in part to paper mills at Kaukauna, Wis., has been completed. It is located on the Fox River, between Kaukauna and Wrightstown, Wis., and was built by the Green Bay and Mississippi Canal Company when it was evident that an older dam at that point could not longer withstand flood waters.

Built of concrete and steel, the dam is considered one of the finest on the Fox River, according to E. F. Everett, United States engineer, under whose supervision the erection took place. The dam is 587.7 feet long. It was built to allow a six foot navigation depth and has eight emergency flood gates which can be raised or lowered by electric motors. Navigation was closed all last season so that the dam could be built. Its construction took two years.

Sixty Paper Mills Operating in Wisconsin

Daily production of paper and pulp mills in Wisconsin has reached a total of 2,200 tons, according to the latest figures compiled by the Wisconsin Manufacturers Association. There are now sixty mills operating in 32 Wisconsin cities. Their invested capital has reached $118,000,000 and they employ 17,000 workers whose annual wage total is $21,000,000. News print now constitutes about one-third of the production and wrapping paper is gaining in volume, with wall board third in importance. The association estimates that Wisconsin has only about 1,000,000 cords of spruce left. It was necessary to import 400,000 cords last year.

Safety Precautions

Wisconsin paper mills, the leaders in safety work, have been checking up their machinery to prevent a repetition of the explosion of a beater roll in the plant of the Interlate Tissue Mills, Ltd., Merritton, Ontario, recently. In case any rolls are located that have been purchased from munitions plants, they will be treated so as to neutralize any nitro-cellulose which might have penetrated to the interior. This is being done at the suggestion of W. J. Peacock, of the Northern Paper Mills, Green Bay, Wis., chairman of the Paper and Pulp Section of the National Safety Council.

Water Wheel Installed at Fox River

Installation of a small water wheel to furnish lighting and elevator power has been started by the Fox River Paper Company, Appleton, Wis. One flume at the Telulah mill is being torn out to make room for the wheel. The former flume room will be used for storage space.

Kimberly-Clark Safety Play

"Mr. Carefulness and Mrs. Carelessness" is the title of a play which was presented before employees of the Kimberly, Wis., mill of the Kimperly Clark Company this week as a means of engendering further interest in the safety contest which is now in progress between this mill and the Kimberly-Clark mill at Niagara, Wis. All employees of the mill gathered in the community clubhouse during their noon hour to see the production. A safety program was also presented, including music and a talk on caution by J. C. Ritten, superintendent of the book mill.

Office men of the Kimberly-Clark Company have organized a four team basketball league. A schedule of games has been arranged and will be played each Wednesday evening at Neenah, Wis. Teams participating represent the main office, the Cellucotton, Kotex and Sanex divisions.

Moloch Organization Holds Open House

Open house was held Friday evening of this week by the Moloch Foundry and Machine Company, Kaukauna, Wis., makers of automatic stokers and other paper mill equipment. The company has been reorganized and has conducted a sale of new capital stock during the last several months. The opening was held so the public could see the progress made in recent months and gain an idea of the extent of this industry.

Frank Wilson Passes Away

Frank Wilson, a former resident of Appleton, Wis., died Wednesday of this week at Perry, Mont., according to word received here. He was superintendent of the Atlas mill of the Kimberly-Clark Company here for a number of years.

Paper Mill Taxes Unchanged

Although the public schools and Outagamie County added $200,000 to the 1927 tax roll, paper mills of Appleton, Wis., were spared an increase in taxes by action of the Appleton Common Council. The city eliminated almost all of its improvements from next year's program so as to keep the tax rate at $30 per thousand dollars of assessment, an increase of only 46 cents a thousand over this year. The situation has been a welcome one to the mills, because new state tax laws have made the assessments on industry a serious burden.

Dr. Baker Addresses Photo Finishers

Dr. H. P. Baker, executive secretary of the American Paper and Pulp Association, spoke recently at a convention of the Photo Finishers of America in Boston on the subject of "Trade Associations as a Profitable Investment in Industry." He is attending a meeting of the Natural Resources Production Department of the United States Chamber of Commerce in Washington on December 14 to consider forestry in the light of

1—Plans for furthering State legislation on taxation, fire prevention and other forestry subjects.

2—Developing plans for spring conference on commercial forestry.

Revision of Paper Specifications

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 30, 1926.—The paper specifications committee of the Joint Congressional Committee on Printing has had a number of meetings in connection with the revision of paper specifications for the Government Printing Office for the coming fiscal year.

It is understood that few changes have been made over last year's schedule and it is expected that the committee will complete its work this week to have the schedule ready for the Joint Committee when Congress convenes on December 6.

Paper Demand Continues Satisfactory in Toronto

Larger Turnover Enjoyed by Local Jobbers During November Than in Corresponding Period Last Year—Unusually Large Amount of Stock Used for Election Campaign Purposes—Wholesale Trade Anticipates Further Expansion of Business

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ont., November 29, 1926.—November has been a good month in the paper business and jobbers all report a larger turnover than a year ago. The provincial elections, which will take place on Wednesday of this week, have resulted in the consumption of an unusually large amount of stock for campaign purposes and printers have been quite busy. The mills are also well employed, although specialty plants report that orders have been spotty. The whole tenor of trade is better than it has been for some weeks. Price changes during the past eleven months have been few.

Coated paper plants are operating only on a fairly active basis and some complaints have been made by jobbers in reference to one or two of the mills selling case lots to private consumers at mill prices and not protecting the jobber. The grievance of the wholesale men along this line has been heard for some time and the matter has been referred to the Canadian Paper Trade Association for action. If the practice is not stopped one jobber stated that he would bring in a car of American coated paper and cease purchasing from Canadian plants. Collections are reported fair and the wholesale trade looks for good business from now until the end of the year. Manufacturing stationers and paper box plants are busy on holiday production and the waste paper business is active.

Bowmanville Factory Sold

The factory of the Ross Can Company, Bowmanville, Ont., which has been idle for a long time, has been sold to the R. M. Hollingshead Company, of Camden, N. J., manufacturers of many varieties of auto chemical products, having the trade mark name of "Whiz." This company will establish a Canadian branch The Ross Can Company went to the wall several months ago, after turning out fiber and metal containers, and the town of Bowmanville had the factory on its hands, which it has just disposed of to advantage.

New Converting Plant for Toronto

Negotiations are being conducted by United States capitalists with property owners in the Don Valley, near Toronto, for the purchase of several acres, on which it is proposed to erect a large plant for paper converting purposes. Application has already been made to the East York Hydro-Electric Commission with a view to securing a thousand horse power for operating purposes. If the deal goes through, it is understood that papier maché goods will be turned out in large quantities by the new industry, which will be located near the plant of the Don Valley Paper Mills, one of the oldest concerns in the Dominion.

Land Classified Before Settlement

Dr. C. D. Howe, Dean of the Faculty of Forestry, University of Toronto, states that the classification of the soils and forest types found in the province of Quebec is progressing at a rate of some 225,000 acres a year under the direction of the Quebec Forest Service. These surveys have been operated for the last ten or fifteen years in advance of new settlement and lumbering operations. Forests are classified into types and their yield of merchantable wood is estimated. The soils are classified as sands, loams and clays, and non-agricultural. The information collected is placed in the forms of maps, where it is readily available. Since 1922, the timber and pulpwood operations on government lands in Quebec have been required to make an inventory of their holdings. This had led to an extensive classification of the wooded areas in the province, and an accumulation of data that is of value to the forest service in administering forest lands.

Complain of Water Conditions

For some time past the Provincial Paper Mills, the Interlake Tissue Mills, and the Lincoln Pulp and Paper Mills, in the Niagara district, have been complaining of the dirty nature of the water occasioned, it is contended, by dredging operators on the new Welland canal and the matter is likely to be taken into the courts. An injunction has been applied for in the hope that the trouble would be overcome by restraining the dredging concerns from stirring up the water to such an extent that the paper mills suffer. If the cause of complaint is not removed, the operators will be asked to install some settling process to avoid further annoyance.

Interested in New Offering

Local capitalists are interested in the details in connection with the offer of $300,000, 7 per cent, cumulative preferred stock of the Mead Pulp and Paper Company, of Dayton, Ohio, who have a prominent list of publishers as customers. George H. Mead is head of the Spanish River Pulp and Paper Mills, and interested in a large way in the Manitoba Paper Company, the Fort William Paper Company and other big paper organizations in Canada.

Pulpwood Market Gets Better

There will be an unusually large cut of pulpwood in Northern Ontario this season and contractors report that help is not too plentiful. The market for wood is improving and the outlook is considered better than it has been for some time. The cut in white pine will be decreased but in other woods the log harvest may be as large as last winter.

Notes and Jottings of the Industry

H. G. French of the United Paper Mills, Toronto, who was confined to his home several days with illness, is able to be around again.

R. G. Jennings, who has been for several years a director of the Fred L. Ratcliff Paper Company, Toronto, has been made secretary of the organization, succeeding the late Norman J. Ratcliff.

W. N. Hurlbut, of Dayton, Ohio, president of the Manitoba Paper Company, Pine Falls, was in Toronto lately on his way west. It is expected that the new Manitoba plant will be producing news print next month.

Good progress has been made on the new fifty ton strawboard mill of the Hinde and Dauch Paper Company of Canada, at Trenton, Ont. The new 126 inch Fourdrinier machine will soon be installed and it is expected that the plant will be in running order early in the new year.

George R. Gray, vice president of the Spanish River Pulp and Paper Mills, Sault Ste. Marie, Ont., was a recent caller upon the trade in Toronto.

The Wilkinson Paper Company, of Toronto, of which Charles V. Syrett is president, announce that it is "up in the air." The company has made arrangements to broadcast from radio station CKCL talks on "Canada's Premier Industry, Pulp and Paper," which will take place on November 30 and December 9.

R. F. Arnett, vice president of the Westminster Paper Mills,

New Westminster, B. C., was a visitor to the paper trade in Toronto and other cities during the past week.

The Continental Wood Products Company, Elsas, Ont., who own large pulpwood and timber limits, turned out in their sawmill during the past season over 21,000,000 feet of lumber, which is a record for a plant of its size. The company are preparing for a big log cutting season, having already some 300,000 pieces on skids.

The inquest into the death of two workmen, killed by an explosion when a stud butt of a beater was being drilled out by an electric drill at the plant of the Interlake Tissue Mills, Merritton, Ont., has been adjourned until December 3 when more witnesses will be heard, and a verdict regarding the cause of the catastrophe brought in.

Alec Dewar, of the Abitibi Power and Paper Company, Iroquois Falls, Ont., who is the editor of the Broke Hustler, the bright official organ of that company, has been honored by being reelected president of the Northern Ontario Associated Boards of Trade.

William Bowler, an employee of the Hastings Paper Mill, Belleville, Ont., was severely injured recently when he was caught between two rollers and had his chest and arms badly crushed.

W. F. Henry, a member of the sales staff of the Dominion Paper Box Company, Toronto, died recently at the Queen's Hotel, Port Hope, Ont., as a result of a paralytic stroke. He was 55 years of age and was well known in the industry.

To Import Wood Pulp Through Albany

ALBANY, N. Y., November 27, 1926.—The first ocean steamships to bring woodpulp from Europe are expected to dock at Albany next spring with the reopening of navigation on the river if plans of the Albany Port Commission go through. The City of Albany is spending millions of dollars to provide terminal facilities and special attention is being given to the needs of pulp and paper manufacturers.

John J. Harvey, traffic manager for the Commission, spent several days in New York City conferring with shippers and brokers. He held a number of conferences with prominent pulp brokers in New York who are anxious to import European woodpulp through Albany as soon as proper facilities can be offered. It is believed that sufficient warehouse space will be ready next spring to receive the first European shipments.

Mr. Harvey also conferred with several agencies on pilotage, tuggage and pulp rates and made arrangements for a ship coming to Albany to load 1,000 tons of paper for shipment to another coastwise point. Port engineers have notified Mr. Harvey that 200 feet of docks and temporary covered storage space for 15,000 or 20,000 tons of pulp will be ready next April or May for pulp shippers.

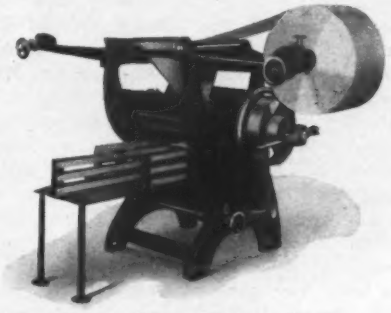
Albany port authorities have been told by pulp brokers that eventually 300,000 tons of foreign sulphite pulp will be imported through Albany each year and that at least half of this amount will be handled with the opening of the port. It is proposed to make Albany the shipping center for cities from Boston to Philadelphia and it is pointed out that transportation costs will be cut nearly twenty-five per cent as the result. Large warehouses are to be erected especially for storage of pulp shipments.

The A. P. W. Paper Company, of this city, has already established a regular ocean steamship service between Nova Scotia and Albany and for several weeks past large sea-going vessels have been docking once a week at the Barge Canal terminal with cargoes of Nova Scotian woodpulp which the A. P. W. Co. is distributing to paper mill customers in northern New York. While the A. P. W. Company has been, for some time past, receiving shipments of woodpulp by steamer from Nova Scotia for use of its own mills in this city, it is only recently that the company branched out into the general distribution business. Next year it is said the company plans to enlarge its activities in this direction.

A New Adjustable Napkin Folder

Increased production and lower operating costs are assured by the adoption of the new adjustable No. 4 Napkin Folder, manufactured by the Hudson-Sharp Machine Company, of Green Bay, Wisconsin. This apparatus can be adjusted to fold napkins ranging from 14 to 20 inches.

It folds napkins in one-quarter or one-eighth fold form—means for changing to various size napkins are rapid—a complete set of change gears are furnished—automatic counter, rapid means



HUDSON-SHARP NAPKIN FOLDER

for changing count—equipped with friction clutch pulley—ball bearing throughout—alemite lubrication system—speed, 300 to 500 napkins per minute—horse power, two—material, constructed of high grade steel and iron—shipping weight approximately 2,800 lbs.

Special requirements of paper manufacturers and converters have at all times been met by the Hudson-Sharp Machine Company's staff of designers, who are qualified by years of effort to fully appreciate and fill their demand for equipment.

Black Clawson Co. Buys Shartle Bros. Plant

[FROM OUR REGULAR CORRESPONDENT]

HAMILTON, Ohio, November 24, 1926.—The Black Clawson Company, of this city, has purchased the plant and business of the Shartle Brothers Machine Company, of Middletown, Ohio, a concern long identified as a manufacturer of pulp and paper mill machinery.

It is the intention of the Black Clawson Company to operate the Shartle Brothers Machine Company plant as a division of the Black Clawson Company, and there will be no change in the personnel of the Shartle Brothers organization, the new owners intending to continue the Shartle Brothers Machine Company as their Middletown branch, where will be manufactured the same specialties as it has manufactured in the past.

In acquiring the Shartle Brothers plant, the Black Clawson Company desires to be in a position to more fully fill the requirements of paper and pulp mills, particularly in the line of machinery for the preparation of stock. By this purchase they are now capable of supplying every type of equipment required in paper mills.

Austrian Paper and Pulp Production

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 30, 1926.—During the first half of the current year production by the Austrian paper mills reached a total of 116,240 metric tons and by the chemical pulp mills 105,820 metric tons, according to a report from American Consul Hurley, at Vienna. These amounts in each instance represents 60 per cent of the total production during the year 1925. The output by the mechanical pulp mills during the same period, which amounted to 49,420 tons, was also slightly above the level during the preceding year.

Los Angeles Paper Business Shows Improvement

More Favorable Conditions Experienced in Practically Every Department of the Industry—New Attitude to Competition is Developing—Heavy Seasonal Demand for Wrapping Paper—Orders From Printing Trade Numerous

[FROM OUR REGULAR CORRESPONDENT]

Los Angeles, Cal., November 24, 1926.—Order is slowly emerging out of chaos in practically every department of the paper business in Los Angeles. During the last few months affairs in the industry have been badly disorganized. With volume business holding its own during this period many of the factors in the trade have been complaining that they have been doing business practically without profit and none has had any plausible excuse to offer for that condition, only that the competitive conditions have been difficult to meet, and that the various factors instead of cooperating were warring. Your correspondent here has had not a little to say about these conditions during recent weeks but always he has held in reserve, mentally it may have been, the hope that things would improve and the trade get oriented to a better view point on what it had to meet and on how to meet it. Apparently this orientation is in process of being attained and it is a pleasure to chronicle an improvement all along the line.

Of course, there is one chronic cause for complaint which apparently always will be with the business in Los Angeles. Reference is intended to the process of dumping of stocks of every conceivable kind out here from time to time and the low prices that are contingent upon that process. Nor does there appear to be any feasible plan by which this can be counteracted.

Just as long as Los Angeles has her climate and just as long as men continue to get enamored of it and persist in living in it, and just as long as so many of them desire to make even a little money to help pay their expenses while they are enjoying the sunshine and the flowers, just so long will Los Angeles be infested by the small brokers in paper, just as they exist in many other lines of industry as well out here, and just so long will the paper industry suffer from this sort of thing. And there is no present chance that the attractions of Southern California's climate will be any different in the future than they are today, hence the paper industry here must inure itself to the affliction from which it suffers and do the best it can in spite of it.

And some of the paper men are beginning to take a philosophical view of this feature in the competitive field and instead of getting panicky and meeting low prices by quoting still lower ones, to the further demoralization of the business, they are accustoming themselves to letting some of this low priced business go to the little fellows and are turning their attention to such business as they are enabled to do at a fair profit. In other words, as one of the jobbers said to your representative recently, if they cannot do business at a profit they prefer not to do any at all, for, said this jobber, what is the use of mere swapping of dollars?

And still another jobber said, "Every house which is known for its quality of product and its service, and for its square dealing, always can get business and usually is loaded with orders which are profitable." And thus the point of view is changing gradually and as a consequence the character of the paper trade is changing and furthermore, it is changing rapidly. This new attitude toward this factor of competition, due to the dumping tactics of some of the eastern mills, is of very recent birth—it has had a life of only a few days actually, but it appears to be a very healthy infant and promises a lusty growth.

Improvement is particularly noticeable in the coarse grades of paper. Wrapping paper is in large demand just now and most of the local jobbing houses handling it are rushed to take care of the volume they are getting. Possibly much of this is due to the season of the year and undoubtedly the proximity of the holiday season has much to do with it. However, whether this is a reason or not, improvement is evident, and apparently the wrapping paper business in any event is in a fairly satisfactory condition at this time.

Printing Trade Active

The same may be said for grades of paper most in demand by the printing trades. In fact, the printing trades appear to be picking up materially and the orders from this source are running into almost unprecedented volume. And speaking of the printing trades, in a recent issue of PAPER TRADE JOURNAL, the results of an investigation of this industry in Los Angeles were commented upon in this department. Some of the paper houses do not appear to approve of this finding. Admittedly, according to them, there are too many small printing establishments in Los Angeles and too many of them are under-capitalized, but, as for their operating under such a heavy loss as is indicated by the report, these paper men assert that upon the contrary most of them are making more money in reality than they ever made before in their lives. These paper men point out that the indicated loss is based upon an arbitrary assumption of what should be a legitimate profit in the printing trades and upon this assumption most of them show an actual operating loss. As an actual fact, however, according to these same paper men, most of these small shops, and it is the small ones which the report hits most severely, really are getting by fairly well and the wages of their proprietors are in excess of what they used to get as journeymen printers. At any rate, whatever the real truth may be about the condition of profits in the printing trade it is undoubtedly giving the paper men a nice volume of business just now and apparently is paying its bills with reasonable promptitude, if what the paper men have to say about collections is any criterion to go by.

Set Up Box Industry Prospers

Things in the paper box industry also show signs of improvement. As far as the manufacturers of set up boxes are concerned practically all differences have been buried and the industry is running along on a prospçrous basis. This branch of the industry began to get better about two months ago and at the present time no one can be found to make any complaints about the way things are going. The set up box manufacturers have no organized association, yet the ten or eleven manufacturers get together at luncheon weekly and talk over their affairs in a friendly sort of manner. They have what may be called a "gentlemen's agreement" which is working for harmonious and cordial relations in the industry.

It happens that among the set up box manufacturers there are some who make folding boxes also. It must be admitted that the situation in the folding box department is still badly disorganized and practically none is making any money out of what business he may be doing. But those manufacturers who combine in the making of the two varieties of paper boxes see in the harmonious working of the "gentlemen's agreement" in the set up field hope for a similar arrangement in the folding field. At any rate, that is the hope of the industry and as soon as some of the disturbing elements learn to have a little more confidence in their competitors this will be brought about. Some of the manufacturers are sanguine that this will eventuate within a few weeks, while others think it will take a much longer time, but all are practically agreed that accommodation of existing differences is in pro-

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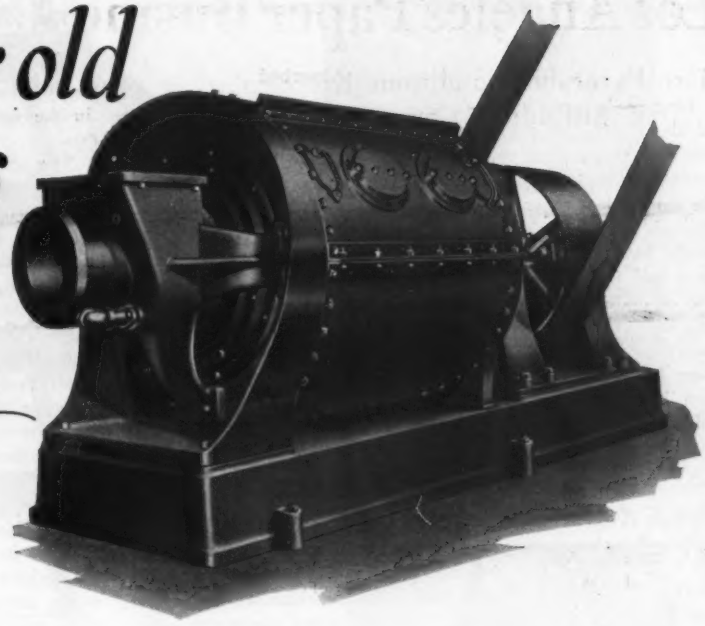

As good for pulp as the Bird Screen is for paper

We think we can show you that the Bird Pulp Screen will materially improve the layout and operating efficiency of your pulp mill and will quickly pay for itself if you put it in place of your present screens.

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cess of becoming a fact and when this shall have been accomplished the paper industry as a whole will have recovered a healthy tone and everything will be Jake.

California Container Co. Absorbed

In a recent dispatch from here there was chronicled the news of the incorporation of the California Container Company. At the time this company was incorporated there was a feeling of resentment and a desire for retaliation in the minds of some of the independent paper box manufacturers. Had the company gone through with its original intent behind it nothing but a contest would have been precipitated in the local industry, which would have had for its outcome nothing less than the annihilation of one or more of the paper box manufacturing concerns. Happily this danger has been averted. It is now the intention of the incorporators of the California Container Company not to continue the company with its original intent, but it will be taken over by the Angelus Paper Box Company and will be run as a subsidiary concern to that institution and will make corrugated containers.

New Building for Angelus Paper Box Co.

Albert E. Stein, of the Angelus Paper Box Company, says that work will be begun early in December on a building which will be 100 x 150 feet in size and three stories in height, at Sixty-first street and Avalon Boulevard, Los Angeles, which will house the machinery for the manufacture of corrugated containers. Arrangements are now being made for an increase in the capital stock of the Angelus Paper Box Company to accomodate the expansion of the company.

Work of Bureau of Standards Paper Section

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 30, 1926.—The past year has been a busy one for the paper section of the Bureau of Standards, according to a statement just released by the Department of Commerce. Standards of quality have been established for raw materials and for finished paper, and standards of performance have been drawn up to govern paper-making processes.

In numerous cases studies of paper testing methods have led to the development of new methods. Some of this work has involved the design of new testing devices, such as a cabinet for testing paper under controlled atmospheric conditions and "wet-rub tester" for finding the wearing quality of the surface of paper. A publication was issued describing and classifying all known methods for testing the degree of sizing of paper—38 in all—including two methods developed by the Bureau. Considerable research was made in development of specification for windows of window envelopes, fiber wall board, and the strength of kraft wrapping paper. Cooperative work in progress with the Technical Association of the Pulp and Paper Industry on formulation of official association paper testing methods is considered of value in the direction of establishing standard methods.

Studies of various fibrous paper raw materials gave the following results. Semi-commercial tests of caroa fiber confirmed the results of previous laboratory tests, showing that the fiber is suitable as a substitute for rage and rope fibers. Stipa ichu grass from Ecuador gave poor results. Tests of waste fibers from the manufacture of manila rope indicate that this material can be used profitably for paper manufacture.

A study of the manufacture of currency paper in the Bureau paper mill led to modification of beater practice in the commercial manufacture of the United States currency paper which gave it greatly increased strength. Various studies of the use of glue in the sizing of paper have yielded definite data both as to methods of application and effects secured. Such data are considered of value as they are almost entirely lacking in paper literature.

No Change in Salesmen's Income Tax Rulings

The Salesmen's Association of the Paper Industry is advising its members in regard to a decision of the Board of Tax Appeals which was reported in the daily press in such a manner as to give many salesmen the impression that there had been radical changes in the deductions allowed salesmen working on a commission basis.

The actual facts are entirely different, as the Salesmen's Association discovered on taking the matter up with the National Council of Traveling Salesmen's Associations, with which it is affiliated, as is shown by the following statement from the National Council:

"Recently there appeared in the New York *World* and other papers throughout the country, a report of the Board of Tax Appeals in Washington refusing to permit the deduction by David Sonenblict, of New York, of certain items of expense. These items were $378 for sample carriers, $400 for models, $365 for entertaining customers, $190 for tips to porters and bell boys, $45 for valet service. The newspapers treated this decision as establishing that such expenses could not be deducted by traveling salesmen for telephone and telegraph, $72 for laundry expenses and $36 salesmen.

"The National Council of Traveling Salesmen's Associations through its counsel, Arthur M. Loeb, immediately investigated the decision and has announced that the press reports did not correctly indicate its effect. Mr. Loeb stated that the Board had disallowed the deduction of laundry and valet charges because it found that these were personal expenses only. The particular taxpayer's laundry and valet expenses were very small, but had he shown that they were greater than he would have incurred if not traveling the Board might well have allowed a deduction of the excess. The remaining deductions by the taxpayer, Mr. Loeb said, amounted to $5,796. Of these, the Board refused to permit the items mentioned above in the total amount of $1,423, but specifically stated as its reason that 'the evidence is not sufficient to warrant' the deductions. The remainder of the $5,796 was allowed by the Board, since it was 'satisfied that the other amounts were expended as itemized above.'

"The National Council has received numerous inquiries from the members of its component associations since the appearance of the press report mentioned above. Salesmen had for some time taken it for granted that the expenses disallowed in the Sonenblict cases were proper items of deduction, since a determination to this effect was obtained by the National Council several years ago after thorough consideration with the officials of the Treasury. It will be seen from Mr. Loeb's statement, however, that the recent ruling of the Board was based only on the evidence in the case before it and in no way changed the ruling previously laid down through the efforts of the National Council, and the decision does not at all limit the rights of traveling salesmen to deduct the expenses of conducting their business."

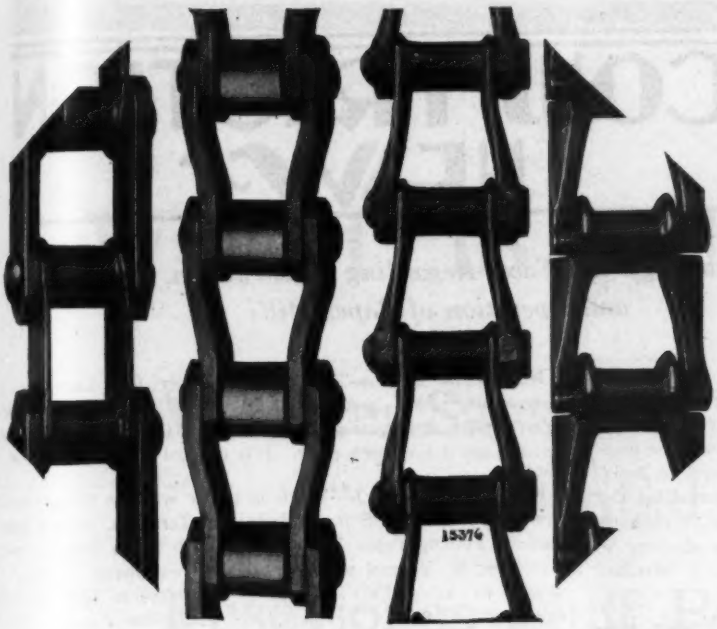
French Plant to Double Capacity

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 30, 1926.—The Societe Calaisienne des Pates a Papier has announced its intention of doubling the capacity of the plant at Calais, according to a report from American Consul Smith. The present capacity is 12,000 metric tons annually. The company uses the Mitscherlich process, depending upon the Baltic states, and particularly Finland, as a source for the necessary pulpwood.

New President for Brompton

E. W. Tobin, M. P., has been elected president of the Brompton Pulp and Paper Company, in succession to the late F. N. McCrea. His election was anticipated by reason of his being the senior member of the Board of Directors.



A Test of Half a Century and the Result

You place confidence in your physician. When medical aid is necessary, you call him, not once but as often as you have need. He has proven his ability to serve you in a special way.

In a like manner, industry turns to Jeffrey Engineers, who are material handling specialists, for simple, economical and effective methods of moving materials. Over a period of 50 years, Jeffrey Equipment has been called upon to serve under the most exacting requirements.

The continued selection of Jeffrey Equipment by such well known pulp and paper mills as S. D. Warren Co., Hinde & Dauch Paper Co., Eastern Mfg. Co., Dill & Collins, Pejepscot Paper Co., Kimberly-Clark Co., and others too numerous to mention is sufficient evidence that Jeffrey Engineers have prescribed well.

Whether you need only a single piece of chain for a simple conveyor or a complete elevating and conveying system there is a Jeffrey Equipment for the task.

The Jeffrey Manufacturing Company

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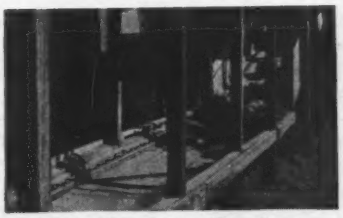
New York	Pittsburgh	Cleveland	Milwaukee	Los Angeles
Buffalo	Scranton, Pa.	Charleston, W. Va.	St. Louis	Birmingham
Rochester, N. Y.	Boston	Chicago	Denver	Charlotte, N. C.
Philadelphia	Cincinnati	Detroit	Salt Lake City	Montreal

Detachab'e Chain Conveyor Handling Pulpwood.

Belt Conveyor Handling Chips.

Spiral Conveyor Handling Coal to Bunkers.



Chain Conveyor Handling Straw.

Wood Apron Conveyor Handling Bundles of Rags.

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Jeffrey Products

Elevators—Conveyors
Portable Loaders
Coal and Ashes Handling Equipment
Skip Hoists
Chains and Attachments
Sprocket Wheels—Gears
Crushers—Pulverizers
Sand and Gravel Handling, Washing and Screening Equipment
Locomotives
Coal Mine Equipment
Ventilation Fans

CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Buchanon, Va.—The Virginia Can Company, Albemarle Avenue and Third street, S. E., Roanoke, Va., is perfecting plans for the establishment of a new plant at Buchanon, for the manufacture of corrugated paper and solid fiber containers. A building previously used for can manufacture will be remodeled and improved for the new factory, with the installation of complete equipment. It is understood that the company is planning to purchase necessary machinery at an early date. E. S. Marshall is general manager.

Noblesville, Ind.—The Ball Brothers Company, Muncie, Ind., has acquired property adjoining its strawboard mills at Noblesville, comprising 60 lots, and plans the construction of a large addition for the manufacture of containers; the work will also include an extension of the pulp department. It is proposed to increase the present output of 100 tons, to close to 200 tons every 24 hours. A list of machinery to be installed will be arranged at an early date. The entire expansion is reported to cost close to $500,000.

Kansas City, Mo.—The Hinde and Dauch Paper Company, Sandusky, Ohio, is reported to have authorized plans for the construction of its proposed new fibreboard mill at Adams and Wyoming streets, Kansas City, Mo. As now projected the plant will cost close to $1,000,000, including machinery; it will be of multi-story type. It is understood that J. F. Cleary, vice-president, Kansas City Fibre Box Company, recently acquired by the Hinde and Dauch organization, will be in charge of construction of the new unit.

Rockford, Ill.—The R. W. Sheets Paper Box Company, 1008 Mulberry street, has preliminary plans under way for the construction of a new brick and reinforced concrete addition to its plant, estimated to cost close to $100,000, including machinery. It is understood that work will be begun in the spring. R. W. Sheets is general manager.

New York, N. Y.—The Lenox Wall Paper Company, 106 Seventh Avenue, has purchased the six-story and basement plant of James Everard at 10-26 East 133rd street, formerly used as a brewery, and will remodel and improve for a new plant. The property extends through to 132nd Street, providing large floor area, all of which will be used by the purchasing company. It is understood that a considerable portion will be devoted to warehouse and distributing service.

Columbus, Ohio—The Central Ohio Paper Company has awarded a contract to the F. & Y. Construction Company, 332 East State street, for a new building at 857 North High street, to be used primarily for garage and kindred service.

Pittsburgh, Pa.—The Republic Bank Note Company, Forbes street, manufacturer of paper specialties, has asked bids on general contract for the construction of a proposed new five-story addition to its plant. It will be 90 x 180 feet, brick, steel and concrete, reported to cost close to $350,000, with equipment. Hunting, Davis & Dunnells, Century Building, Pittsburgh, are architects.

New York, N. Y.—The Novelty Paper Box Company, 71 Greene street, has leased space in the building at Hubert and West streets, aggregating about 30,000 square feet of floor area, and will use it for a new plant. It is planned to take possession at once.

North Bergen, N. J.—Work is under way on the proposed new mill at the North Jersey Industrial Terminal, for the International Folding Paper Box Company, 396 South Second street, Brooklyn, N. Y., and will be pushed to completion. The plant will be two-story, 100 x 260 feet, to cost close to $250,000, with equipment. Bonanno Brothers, 388 Bergenline Avenue, Union City, N. Y., are general contractors.

Milwaukee, Wis.—The Shellmar Products Company, 1613 Humboldt Avenue, manufacturer of glassine wrapping papers and other special processed stocks, is said to have authorized plans for the immediate rebuilding of the portion of its plant, destroyed by fire November 19, with loss reported in excess of $200,000, including equipment. The structure destroyed was 75 x 120 feet, and it is understood the new building will be approximately of the same size; the machinery is reported as a total loss.

Rothschild, Wis.—The Marathon Paper Mills Company is awarding miscellaneous contracts, including roofing, etc., for the completion of its new two-story and basement addition, 40 x 85 feet, and proposes to have the structure ready for service at an early date. The building will cost about $32,000.

Prince George, B. C.—A project is under way for the construction of a new local pulp and paper mill, comprising a number of units, with machine shop, power house and other operating structures, reported to cost more than $2,000,000. Wood, Gundy & Co., 36 King street, West, Toronto, Ont., are understood to be interested in the project.

Cochrane, Ont.—The Abitibi Power and Paper Company, Montreal, Que., operating a large paper mill at Iroquois Falls, is said to have preliminary plans under way for a new news print mill in the vicinity of Cochrane, to be equipped for an initial output of about 200 tons per day. It is reported to cost more than $1,000,000, with machinery; facilities will be provided for the employment of close to 500 men.

Deschenes-South Hull, Que.—The International Paper Company, 1 Pershing Square, New York, is said to be considering the construction of a new newsprint mill in this vicinity, with initial cost of close to $2,000,000. A transmission line will be built from one of the company's hydroelectric power developments for service at the plant. A pulp mill is also included in the program.

Windsor Mills, Que.—The St. Maurice Valley Corporation is said to be concluding arrangements for the acquisition of the Canada Paper Company, specializing in the manufacture of news print and wrapping papers, and a special meeting of stockholders has been called on December 14, to approve financing for the consolidation. In connection with the project, the purchasing company is reported to be considering extensions and improvements in the mill and property of the Canada company, for increase in

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Puseyjones Stuff Pumps are pumps of quality.

We have in stock available for prompt shipment Three 8 x 18 Triple Stuff Pumps that are priced right.

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capacity. Sir Herbert Holt is president of the purchasing organization.

New Companies, Etc.

New York, N. Y.—The Pearl Paper Box Company has been incorporated with nominal capital of $5,000, to manufacture and deal in paper boxes and containers. The incorporators are S. Glick and W. Kaiser. The company is represented by I. E. Kanner, 261 Broadway, New York.

Detroit, Mich.—The Bernhardt Paper Company, has been incorporated with capital of $12,000, to manufacture and deal in paper specialties. The incorporators are Harold S. Reynolds and Floyd O. Bouggy, and Hugh J. Bernhardt, 300 Cortland Avenue, Highland Park, Detroit. The last noted is representative.

Atlantic City, N. J.—The Burcurmac Pulp and Paper Company, has been incorporated with capital of $40,000, to manufacture paper products. The incorporators are John M. Burby, E. L. Curtin and James R. MacDonald, 7207 Winchester Avenue, Atlantic City, the last noted is representative.

New York, N. Y.—The Tribune Paper Mill Supply Company, has been incorporated with capital of $10,000, to manufacture and deal in paper specialties. The incorporators are A. Segall, S. Herbsman and M. Kaminsky. The company is represented by A. G. Grayzel, 305 Broadway, New York.

Dallas, Tex.—The Dixie Wax Paper Company, Inc., 1330 South Polk street, has filed notice of increase in capital from $50,000, to $100,000.

Lock Haven, Pa.—The Castanea Paper Company has increased its capital from $18,500,000 to $18,750,000, for expansion.

Philadelphia, Pa.—The Conshohocken Wax Paper Company has filed notice of increase in capital from $100,000, to $150,000, for general expansion.

Paper and Twine Organization Prospering

Members of the Paper and Twine Board of Trade, Inc., participated in an enjoyable dinner, followed by an instructive meeting, at Schleiffers Restaurant, 309 Fifth Avenue, New York, on Tuesday, November 23.

The chairman, President Charles Greif, opened the proceedings with a short resume of the things the Board of Trade had accomplished in its short history, including its successful fight against short count tissue, and the adoption of the organization label.

Ben Kushel, director, stressed the value of service and the benefits reaped thereby. He also advocated cost system operation and recommended the members of the paper and twine industry to organize for success.

Irving Barron, economist, addressed the gathering on "Cost Finding and Cost Computation, and illustrated the principles involved. He particularly pointed out the importance of comparisons of different periods.

Secretary Michael H. Sincoff took "Cooperation" as his theme and appealed to every paper and twine jobber in New York to join the Board of Trade and to assist in raising the business ethics of the industry and to eliminate cut-throat competition. He declared that the organization was a growing body, making saisfactory progress, and profiting by the mistakes of the former paper and twine organization.

Jack Sinoff also spoke on the necessity of raising the status of the industry. Considerable enthusiasm was manifested at the event and further expansion of the Board of Trade is confidently looked for.

To Receive Bids for Paper Towels

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 30, 1926.—The Bureau of Supplies and Accounts, Navy Department, will receive bids on December 7 for 50,000 packages of folded paper towels.

Obituary

Mrs. Charles W. Shartle

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, November 29, 1926.—Members of the Miami Valley trade sympathize with Charles W. Shartle, head of the Shartle Brothers Machine Co., Middletown, in the death of his wife, Lucy Shartle, which occurred last Friday at Little Rock, Ark., where she was visiting her daughter, Mrs. Robert Storm. Death followed a paralytic stroke sustained on the previous Tuesday. Mr. Shartle and his son, William, reached Little Rock before death ensued and accompanied the body to Middletown where funeral services were conducted today.

Mrs. Shartle was widely-known in this section of the state, many present-day business men looking back to their student days when she was their teacher and keenly deploring the passing of one whose thoughtful care and scholarly attention made an impress that remained through succeeding years.

Mrs. Shartle was a sister of Adam Bridge, Franklin, who with Homor Martindale, a brother-in-law of the decendent, were interested with the Shartles in the paper machine business for many years at Middletown.

Mrs. Shartle is survived by seven children, two brothers, and a sister. The Shartle family resides in a commodious home on the Bluff, opposite the Miami Valley Chautauqua grounds, near Franklin.

Boston Paper Trade Bowling League

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., November 27, 1926.—One of the largest bowling leagues of the kind in this city, and reported to be one of the fastest, was formed this fall among the paper trade. The league is composed of ten teams. The concerns represented and the standing of the teams to date are as follows:

Standing of Teams

TEAM	WON	LOST	PINFALL
H. J. Dowd Co.	7	1	2649
Carter Rice Co.	10	2	4029
Stimson & Co.	8	4	3981
Cook Vivian Co.	7	5	3885
Andrews Paper Co.	7	5	3904
D. F. Munroe Co.	5	7	3898
Storrs & Bement Co.	5	7	3727
Knight, Allen & Clark	4	8	3740
Stone & Forsyth Co.	2	10	3829
Whitney Bros.	1	7	2400

Records to Date

Individual single string, Bills (Andrews), 124. (Armstrong Stimpson).

Individual three string, Hooley (H. J. Dowd), 336.

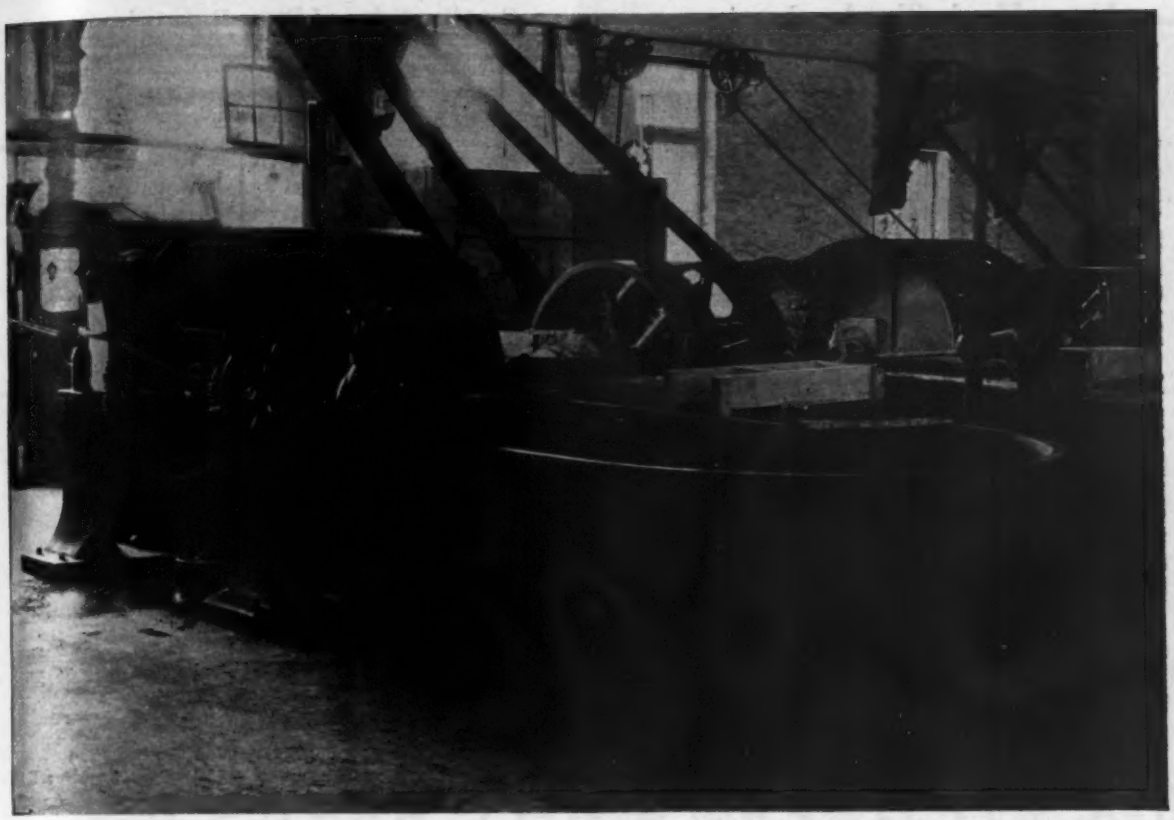
Team single string, Stimpson & Co., 497.

Team three string, Andrews Paper Co., 1396.

Pulp and Paper Exports From Finland

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 30, 1926.—Exports of pulp and paper from Finland during the first nine months of the current year reached an aggregate value of $27,357,600, in comparison with $26,606,200 during the corresponding period of last year according to a report from the office of the Commercial Attache at Helsingfors. This rise in value, however, is due almost entirely to increased shipments of sulphite pulp, exports of other classes of woood pulp as well as of news print and boards having fallen off. Shipments during the period January 1 to September 30 of this year inclusive comprised 191,862 metric tons of sulphite, 106,528 tons of news print, 53,932 tons of sulphate pulp, 50,078 tons of mechanical groundwood, 30,169 tons of boards, and 22,417 tons of wrapping paper.



Another installation of NEW TYPE beating engines saving power, reducing operating costs, increasing production. Beater room problems in this mill have been solved.

For better quality of paper the latest improved beating engines of proved merit are clearly indicated. Painstaking attention to design, honest striving to build the best and a constant aim to give the maximum of service, these are the qualities we endeavor to put into the construction of NEW TYPE beating engines.

DILTS MACHINE WORKS, INC.

FULTON, N. Y.

New York Trade Jottings

W. G. Mitchell, assistant to the president of Price Brothers & Co., Ltd., Quebec, was a New York visitor last week.

* * *

The New York division of the Salesmen's Association of the Paper Industry held its regular weekly luncheon last Monday at the Canadian Club.

* * *

F. W. Pickard, vice-president of E. I. du Pont de Nemours & Co. sailed from New York last week on the *Berengaria*. Mrs. Pickard accompanied him on the trip, which will take them to France and Italy.

* * *

The Ragone Paper Stock Company, of 25 Broadway, New York, now has the sole selling agency in the United States and Canada for the firm of Impex, of Via Durini 1, Milano, Italy, exporters of papermaking rags and other waste material.

* * *

At the annual meeting of the Texas Gulf Sulphur Company held recently the number of directors was increased from seven to nine, and as a result of this meeting William Boyce Thompson, Wilber Judson and H. F. J. Knoblock were elected to the board Theodore Schulze retired.

* * *

Dr. Hugh P. Baker, secretary of the American Paper and Pulp Association, was in Washington last week attending the meeting of the executive committee of the National Wood Utilization Committee. Dr. Baker also conferred with a number of government officials while in the capital.

* * *

Melvin A. Taylor, president of the First National bank of Chicago, was elected a director of the General Electric Company at a meeting of the Board in New York November 24. He is a member of the American Bankers Association, the Illinois Bankers Association, the American Economic Association, Southern Society of Chicago and Art Institute of Chicago.

* * *

The Salesmen's Association of the Paper Industry have appointed the following banquet committee to act with the secretary in making arrangements for the program for their annual meeting and banquet on February 22, 1927: Endicott Rantoul, chairman, A. R. Melker, George H. Attfield, Alan B. Helffrich and Robert C. Fay.

* * *

The National Association of Waste Materials, Inc., says in its Traffic Bulletin that it understands that one of the large lighterage firms in New York Harbor has filed an application with the Trunk Line Association for an increase in charges for lighterage at New York, which increase in some cases amounts to 100 per cent. The increase is for the allowance made by the railroads but if granted will undoubtedly affect the charges ultimately imposed on export and import traffic or any other traffic where lighterage is performed.

* * *

J. P. and L. A. Kissling have sold for Frank W. and Alice D. Blauvelt the southwest corner of Ninth avenue and Twenty-fifth street, a six-story loft building on plot 50 x 100. The purchaser is the Lenox Wall Paper Company, which will make extensive alterations and occupy. Last week it was reported that the Lenox Wall Paper Company, of which Abraham Silverman is president, bought through Louis Bayer from the J. Dubinsky Realty Company the former James Everard Brewery property, at Nos. 10-26 East 133d street, running through the block to 132d street, a six-story fireproof building.

Canadian Pulp and Paper Exports for October

[FROM OUR REGULAR CORRESPONDENT]

According to the report issued by the Canadian Pulp and Paper Association, the exports of pulp and paper from Canada in October were valued at $15,647,249, the highest figure reached since March of this year. The figures show an increase of $430,000 over the previous month and of $1,700,000 over October, 1925.

The total for the month was made up of exports of wood-pulp valued at $4,633,043 and paper valued at $11,014,206, the corresponding values for September being $5,133,406 and $10,085,804 respectively.

Details for the various grades of pulp and paper are as follows:

	October, 1926 Tons	October, 1926 Value	October, 1925 Tons	October, 1925 Value
PULP:				
Mechanical	36,159	$1,053,685	49,902	$1,445,060
Sulphite Bleached	18,842	1,448,521	17,031	1,280,194
Sulphite Unbleached	21,340	1,196,994	19,670	1,041,939
Sulphate	15,292	933,843	12,608	759,281
	91,633	4,633,043	99,211	4,526,474
PAPER:				
News Print	159,509	10,434,174	124,529	8,773,538
Wrapping	1,282	148,510	1,374	182,865
Book (cwts.)	6,915	57,237	4,463	42,646
Writing (cwts.)	922	6,837	562	4,886
All Other	....	367,446	.....	413,354
		11,014,206		9,417,289

For the first ten months of the year there has been an appreciable increase in the value of pulp and paper exports over the corresponding months of 1925, the total value for the current year being $142,737,970 as compared with $125,463,628 in the ten months' period last year. This represents an increase of $17,274,342 or nearly 14 per cent.

Exports of wood pulp in these months were valued at $43,004,510 and exports of paper at $99,733,460 as compared with $38,708,391 and $86,755,237 respectively in the first ten months of 1925

Details for the ten months period are given below:

	Ten Months, 1926 Tons	Ten Months, 1926 Value	Ten Months, 1925 Tons	Ten Months, 1925 Value
PULP:				
Mechanical	311,546	$ 9,397,285	277,667	$ 8,146,495
Sulphite Bleached	168,866	13,170,983	155,196	11,631,072
Sulphite Unbleached	207,746	11,782,644	212,451	11,405,593
Sulphate	136,331	8,653,598	123,100	7,525,231
	824,489	43,004,510	768,414	38,708,391
PAPER:				
News Print	1,421,849	93,626,449	1,142,029	80,487,010
Wrapping	15,566	1,916,594	17,102	2,318,828
Book (cwts.)	48,767	418,188	35,131	328,955
Writing (cwts.)	16,483	122,730	8,796	74,773
All Other	.....	3,649,499	.....	3,545,671
		99,733,460		86,755,237

Pulpwood exports have been slightly lower this year, the quantity exported for the first ten months being 1,249,907 cords valued at $12,590,638 as compared with 1,290,120 cords valued at $12,842,564 exported in the first ten months of 1925.

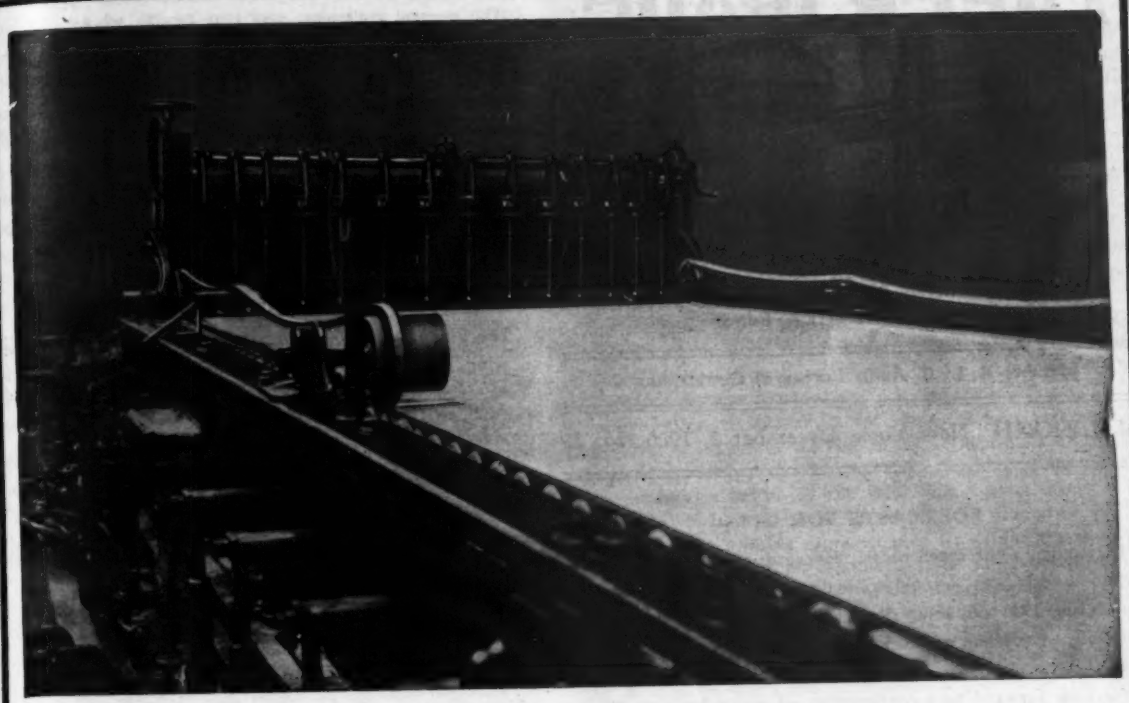
GATINEAU RIVER PLANS

(*Continued from page 21*)

as the project will be entirely financed by British capital. The total cost of the undertaking, which is now under way, will be between $13,000,000 and $15,000,000. The company will issue further debentures, of which £1,800,000 have already been sold. In addition arrangements have been made for the sale of some of the $8,000,000 in preferred stock in England. These securities will provide all the capital required for the completion of the plant, which is to produce 450 tons of news print daily.

New Mill for Abitibi Co.

The Hon. Charles McCrae, Minister of Mines for the Province of Ontario, has announced that a 200-ton paper mill will be part of the expansion program of the Abitibi Power and Paper Company, which now owns and operates the 550-ton paper industry at Iroquois Falls. The new mill is to be erected at Cochrane, Ont.



IN A PAPER THICKNESS GAUGE

How Does Your Paper Test?

Does it show decidedly uneven caliper like so many papers on the market, or would it have a true and uniform thickness?

The great importance of even caliper cannot be over emphasized. The printing quality of paper should be the first consideration of the manufacturer. Printers are now demanding stock of uniform thickness. It is necessary if they are to get best results at reasonable costs.

Perhaps you are making a sheet of fairly even caliper with the aid of aprons and slices. It would be much easier for you to be able, with a few adjustments, to produce a sheet of even caliper across the entire width of the machine, without the use of slices and the usual long apron.

This can be done if you install a Voith High Pressure Stock Inlet. Minute adjustments on this remarkable piece of equipment can be readily and quickly made and paper of uniform caliper is produced. Let us give you complete information about this machine.

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The Magazine of the Paper Industry
HENRY J. BERGER, Editor

Member A. B. C. Audit Bureau of Circulations

Vol. LXXXIII New York, December 2, 1926 No. 23

FORECASTS FOR 1927

The Annual Conference of the Harvard Economic Service at Boston recently was devoted to a discussion of business conditions during 1926 and prospects for 1927.

Officially stated, the conclusions of the Harvard Service are as follows:

"We look forward to a continuation of active business during the next half year, despite irregularities from month to month, section to section, and industry to industry. It is hardly probable that business will attain higher levels than those of the second half of 1926; and because of the several moderating influences discussed above, including the possibility of a temporary recession in basic industry, it may average somewhat lower. Taken all in all, however, we believe that the prosperity phase of the present business cycle has not come to an end, and we expect it to continue until a marked and persistent rise of money rates, attended by declining stock prices, indicates that a major decline of business is near at hand."

Col. Ayres of the Cleveland Trust Company gave his usual interesting discussion of the situation and several forecasts for 1927. He suggested that the year 1927 will compare with the year 1926 as 1924 did with 1923, and that there would probably be fewer cash disbursements by industrial companies, but not much reduction or passing of dividends.

Forecasting for 1927, Col. Ayres said that his impressions were:

1. A slightly decreasing trend in interest rates and increasing bond prices.
2. An actively irregular stock market.
3. Somewhat reduced volume of new building construction.
4. Employment good, but not quite so good as in 1926.
5. Wages firm but not advancing.
6. Iron and steel output somewhat less than in 1926.
7. Somewhat reduced automobile output, with a total for the United States and Canada of passenger cars and trucks of about 4,250,000.
8. Industrial profits somewhat less in total volume than during 1926.
9. Finally, that 1927 will be an intermediate, indeterminate year between prosperity and depression, but with an upturn likely to be under way before the end of the year.

The general consensus was that on the whole 1926 has been perhaps the most prosperous year ever seen by American business; that it is not to be expected that 1927 will be quite so good, although no real depression is in sight, because conditions are fundamentally sound; and that there will be no great change in general price levels during the next few years.

Special emphasis was laid upon the fact that money conditions continue easy and that the Federal Reserve system will apparently prevent money panics which might otherwise arise.

THE FORTHCOMING POWER SHOW

The Fifth National Exposition of Power and Mechanical Engineering, which is to be held in the Grand Central Palace, New York, from December 6 to December 11, inclusive, has attained the ideals of its originators in that it will be an all inclusive exhibition of all types of mechanical equipment. This mammoth exposition is to occupy four floors of the Palace and gives opportunity for nearly 500 manufacturers to display their products. It is estimated that 100,000 engineers and industrial executives will visit the coming show.

Power generating apparatus and accessories will, of course, furnish the main attraction to the visitors. The tremendous advances in the development of means of transforming coal and oil into heat and power insure a large number of novel exhibits which will attract the attention of many visitors. But there will also be numerous novel exhibits in the displays of refrigeration apparatus, of heating and ventilating equipment, of materials handling devices, of mechanical power transmission machinery, of machine tools and of the many other classes of machinery upon which modern industry depends. Novelty is the keynote of this exposition, the greatest annual showing of mechanical apparatus in the country.

The increase in size and in attendance and the broadening scope of the exposition from year to year is significant of the increasing service this show renders to both exhibitor and visitor. The great advances in mechanical development require a yearly presentation to the engineering and industrial public at an exposition in New York.

The Exposition of Power and Mechanical Engineering is therefore confident of consistent and steady development as an annual event to satisfy the demand for the first hand knowledge that only an exhibition can bring of the newest and latest in mechanical equipment. The managers of the Exposition are Fred W. Payne and Charles F. Roth, with offices in the Grand Central Palace.

FEDERAL CONCILIATION SERVICE

The Conciliation Service of the United States Department of Labor, according to the Annual Report of Secretary Davis, during the fiscal year 1926 used its good offices in 551 industrial disputes —strikes, threatened strikes, and lockouts. Commissioners of conciliation were successful in securing settlements in 377 cases. In 70 cases they aided State and local agencies and civic committees in clearing up, or were present in the locality of dispute, but did not participate in the local trade disputes. In 61 cases they were unable to secure adjustment, but even in a few of the latter, settlements were eventually reached along lines suggested

by the departments representatives. At the end of the fiscal year there were 43 pending cases.

In addition to the record of cases submitted and adjusted during the fiscal year, 35 of the cases carried as pending at the close of the last fiscal year were also satisfactorily adjusted. Total adjustments during the period covered by this report number 412.

"It is a matter of real satisfaction," says Secretary Davis, "that large numbers of employers and employees directly interested in cases handled by the representatives of this service have filed with the department letters of commendation in which they heartily approve of the methods employed by this branch of the department in the handling of trade disputes submitted for conciliation."

The efforts of the representatives of this service are directed always toward the prevention of an open break that stops production, with the consequent loss in wages and profits. They endeavor to have work go on while negotiations are being conducted to bring about a settlement of the existing differences. If this be impossible and a strike or lockout occurs, then their task is to secure a prompt and workable adjustment, having always in mind the interests not only of the employers and employees but of the public as well.

The success that has followed as a result of the work of this branch of the department during the fiscal year can not be definitely set forth in the records, because in scores of instances, employers and representatives of employees have counseled with and accepted the judgment and advice of the commissioners on matters of industrial relationship which possibly might have resulted in serious strikes or lockouts. There is no way of recording the exact results of this important part of the work of the commissioner of conciliation.

Boston Paper Trade Improving

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., November 29, 1926.—Dealers state that from January 1 to November business in box boards has been better than in the corresponding period of 1925. In the last two months prices on the whole have been fairly stable. Although buying is rather quiet at the present time, indications are that an improvement will develop within the next two or three weeks. Consumers have placed orders with dealers for seasonal requirements yet to be delivered. Some Christmas trade is still to come. Box makers are busy and will be active up to four or five days before the holidays. After the Christmas activity the trade will swing over to staples again. Within the next two weeks dealers will anticipate the demand for staple lines. The demand is nearly equal on all grades. Deliveries on chip board, however, are a trifle quicker, because of a smaller volume of orders. Folding boards are fully as stiff as they were.

The Boston market for old papers, bagging and rags, has been more or less affected by the low prices prevailing in New York. Mixed papers have declined 50 cents a ton, so that they are now quotable at $11.50 f.o.b. cars Boston. A good volume of white blank news was sold during the week at $1.70. Kraft papers in the best packings were steady at $2.20 to $2.25. The roofing rag market was firm at about $1.50, delivered mill, with roofing bagging at $1.25 to $1.30, delivered mill. Foreign roofing rags were sold at $1.55 ex dock, while foreign linseys are reported to have moved at $1.70.

Franz Loeser, of the firm of H. Loeser & Co., Trier, Germany, called on the Boston trade November 19.

F. F. Spaulding, of the Spaulding and Tewksbury Company, 232 Summer street, has just returned from a trip to Guatemala.

International Paper Staff Changes

[FROM OUR REGULAR CORRESPONDENT]

CORINTH, N. Y., November 27, 1926.—C. W. Walker, general superintendent of the Hudson River Mill, of the International Paper Company, who has been appointed manager of the International Paper Mill at Three Rivers, Quebec, will leave Corinth about December 1 for Canada to assume the duties of his new position.

Clinton V. Cassidy, who has long been identified with the International Paper Company, and for several years connected with the general offices of the corporation in New York City, has been named superintendent, succeeding Mr. Walker. Official announcement to this effect was made at a farewell reception tendered Mr. Walker by officials and employees of the local plant a few days ago.

The reception to the popular departing superintendent was attended by practically every employee of the mills with members of their families as well as officials of the local plant. About six hundred persons attended the gathering.

Julian Miller as spokesman for the employees expressed the deep regret of his fellow workers in the departure of Mr. Walker, who was extremely well liked by employees during his fourteen years as superintendent of the local mill. As a token of the esteem in which he is held by workers in the plant he was presented with a suitably engraved gold watch and traveling bag.

The women employees of the Corinth mill presented Mrs. Walker, the superintendent's wife, with a wrist watch, a traveling bag, and a large bouquet of roses and crysanthemums.

In a brief response to the presentation addresses, Superintendent Walker promised the men that he would return to Corinth from time to time to renew old friendships and to enjoy the annual deer hunting. He asked the employees to give Mr. Cassidy, his successor, the same wholehearted co-operation which has been accorded him in the past.

Clinton V. Cassidy, the new superintendent of the mill, has been for several years past assistant manager of the International Paper Company with headquarters in New York City. He is well known in the Hudson Valley section, having been located in Glens Falls during the period that the late George H. Parks was general manager of the company and the main offices were in South Glens Falls. When the general offices were moved from South Glens Falls to New York City, Mr. Cassidy and his family took up their residence in the Metropolis.

Hudson River Swollen

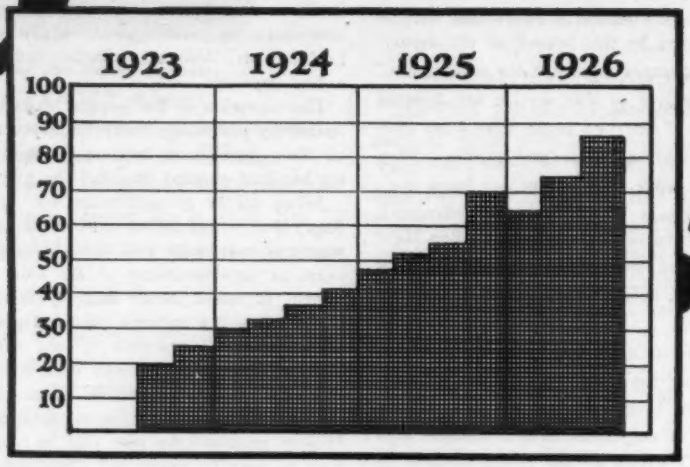
[FROM OUR REGULAR CORRESPONDENT]

GLENS FALLS, N. Y., November 20, 1926.—Heavy rains of the last few days have swollen the Hudson River to such an extent that the average flow of water Friday over the Glens Falls dam at the plant of the International Paper Company was 1600 cubic feet per second. Officials at the I. P. mill stated that the water is the usual amount due in the fall. Last spring the flow at the I. P. plant was 50,000 cubic feet per second. Records in the company's office on Friday showed that there was a depth of four feet on the crest of the dam. In the vicinity of Corinth the high water flooded lowlands and caused considerable damage. Several of the flashboards on the dam at the Curtis Pulp Mill were washed away. These will be replaced as soon as the river recedes.

Dr. Taylor Addresses Miami Valley Superintendents

Dr. W. A. Taylor, president and chemical director of the LaMotte Chemical Products Company, Baltimore, Md., spoke before the Miami Valley Division of the American Pulp and Paper Mill Superintendents' Association, at Middletown, Ohio, on November 27. The subject of his address was "The A B C of Hydrogen Ion Control in Pulp and Paper Manufacture."

Growth!



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Two factors have influenced this phenomenal growth .... the feeling on the part of manufacturers that they need a quality size .... and their appreciation of the engineering service we gladly offer.

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AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Conducted by W. G. MacNAUGHTON, Secretary

Surface Sizing of Paper With Glue*

By George K. Hamill,[1] V. H. Gottschalk,[2] and George W. Bicking[3]

I. Introduction

In the early developments of the industry, paper was sized by immersion of the hand-formed sheets in a bath of animal size or starch. From this practice arose the term "tub sizing," often used interchangeably with the later term "surface sizing." Under modern operating conditions paper generally is surface sized in a continuous web as formed on a fourdrinier machine. Surface sizing renders paper nonabsorbent and gives it a smooth hard surface, the writing quality of which is superior to that obtained by rosin sizing. Engine sizing with rosin makes paper water resistant but the surface sizing process increases its strength and toughness as well. In addition, paper that is surface sized possesses such desirable qualities as firmness and resiliency, as well as the ability to withstand repeated erasures. Surface sizing with animal glue imparts to paper the characteristics of strength and resistance to wear to a higher degree than when mixtures of starch and animal glue, or starch materials exclusively, are used.[4]

Since surface sizing is a relatively costly process economic considerations have tended to confine its use to fine papers such as rag-content bonds and ledgers and to such specialties as blueprint and photostat papers. Frequent attempts have been made to apply various modifications of surface sizing processes to other types of paper in which extraordinary strength and resistance to wear are desirable, but generally these have not been commercially successful.

The special investigational work by the Government Printing Office in cooperation with the United Typothetae of America[5] to determine whether definite grades could be established for bond and ledger papers has focused attention on these types of paper. Discussion of these test results has included reference to the effects of surface sizing as well as of various chemical treatments.

The growing interest in the question of paper permanency[6] has also aroused further interest in surface sizing as it appears[7] that papers surface sized with animal glue deteriorate less with age than those sized with any of the various other commonly used materials.

The U. S. Bureau of Standards, in cooperation with the U. S. Bureau of Efficiency and the National Association of Glue Manufacturers, has made preliminary studies of certain phases of surface sizing. Since this subject is receiving considerable attention at the present time the following observations are offered in the hope of stimulating further discussion and of obtaining suggestions for so directing later work on surface sizing as to make it of the greatest possible value to the paper industry.

II. Equipment Used

Small-scale experiments have been carried on using laboratory equipment for the sizing bath and a laundry wringer for squeeze rolls. The sheets of paper so sized were air dried at room temperatures varying from 70 to 80° F. or on a Noble and Wood laboratory paper drier. (See Fig. 1.)

In large scale trials the semicommercial equipment of the Bureau experimental paper mill was used for both sheets and rolls of paper. The sizing vat (See Fig. 2) is an open wooden box with inside dimensions of 58½ x 24 x 8 inches. It is heated by a steam coil made of twenty feet of ¾-inch galvanized iron pipe and contains three adjustable rollers for controlling the degree of immersion. The squeeze rolls are 5 inches in diameter, the upper one brass, the lower one rubber covered on a steel core.

When paper was tub sized from a roll it was dried on a festoon drier. (See Fig. 3.) The festoon rack is 15 feet in length and has a capacity of 380 feet of paper in 27 loops, each 7 feet in length. It is not enclosed and has no provision for heating so that it was necessary to dry all papers at room temperature after sizing.[8] Several lots of the experimentally sized papers were calendered on the Bureau 9-roll Holyoke supercalender for printing tests.

III. Materials Used

1. Paper

The papers sized were generally 100 per cent rag fiber papers made in the Bureau experimental mill. In some of the small scale work commercial rag, rope, and kraft papers were used.

2. Glue

In most of the experiments a medium grade of hide glue was

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* Published by permission of the Director of the Bureau of Standards of the U. S. Department of Commerce, Washington, D. C.

[1] Research Associate at the Bureau of Standards for the Glue Research Corporation.

[2] Technical Adviser to the U. S. Bureau of Efficiency.

[3] Paper Maker, U. S. Bureau of Standards.

[4] The Manufacture of Pulp and Paper, Vol. 5, sec. 2, part 2, p. 45. McGraw-Hill Book Co. 1925.

[5] Second report, Tabulation of Test Results on Commercial Ledger and Bond Papers: Testing section, Government Printing Office, May, 1926.

[6] Paper for Permanent Records: U. S. Dept. Commerce, Technical News Bulletin of the Bureau of Standards, No. 105, p. 5, January, 1926.

[7] Gösta Hall, Permanence of Paper: Technical Association Papers, Series 9 (1926), No. 1, pp. 92-98.

[8] The festoon drier is now being so equipped that controlled temperature and humidity drying conditions will be available for the further experimentation planned.

used. When tested by the standard methods[9] of the National Association of Glue Manufacturers this glue had a jell strength of 215 grams and a viscosity of 58 millipoises. Animal size prepared from buffalo hide cuttings at a fine paper mill was used in a few trials.

IV. TEST METHODS

1. General Outline

Paper was sized experimentally with several different combinations of the variables possible in the process. Among the factors

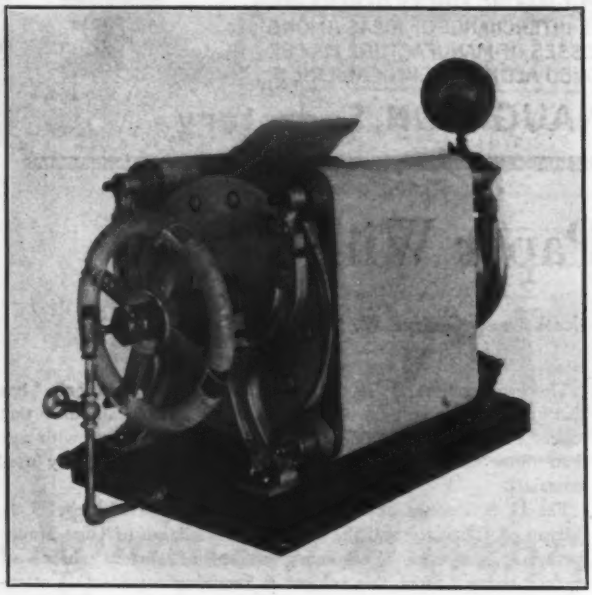

Fig. 1
Bureau of Standards Laboratory Paper Drier.

changed from one trial to another were the temperature of the sizing bath, the concentration of the blue, the degree of alkalinity or acidity of the sizing bath and the time of immersion of the paper in the bath. In some cases the freshly sized paper was air dried directly; in others, the sized paper was "wet packed" (rolled while damp and covered by damp cloths) for up to 24 hours before air drying in order to observe the effects of this treatment on the distribution, on or within the papers, of the glue retained from the sizing bath. A brief study was made of the effects of formaldehyde as a glue hardening agent and of glycerine as a softening agent or lubricant.

The sized papers were tested physically by the usual methods,[10] special attention being paid to the bursting strength, folding endurance, and resistance to wet rubbing. The wet-rubbing tests were made by a mechanical device in which a rubber stopper was drawn back and forth over the wet surface of the paper until the test piece was worn completely through. The glue retained in the sized papers was calculated from nitrogen determinations made by the Gunning method.[11] Printing tests by the wet intaglio process were made on several lots of the surface-sized papers.

2. Typical Laboratory Sizing Trial

In a preliminary laboratory experiment, sheets of water-leaf all rag paper, commercial rope manila, kraft wrapping, and sulphite-soda (both filled and unfilled) book papers were used. The sizing treatment consisted of floating the sheets on the surface of the bath before immersing them for 2 seconds in a 5 per cent glue solution at 120° F. As they were removed from the size bath the sheets were squeezed between the rubber rolls of a laundry wringer and then divided in two portions. One-half of the sheets were air dried directly, the other half were sprayed with a solution containing 10 per cent of formaldehyde and 10 per cent of glycerin and were then air dried. The air drying was done at room temperatures of 78-83° F.

The results of the physical tests of these papers are shown in Table 1.

TABLE 1.—PHYSICAL TESTS OF LABORATORY SIZED SHEETS

Paper	Weight increase		Bursting strength			Folding endurance			Wet rub		
	Glue sized	Glue sized and sprayed with formaldehyde	Original paper	Glue sized	Glue sized and sprayed with formaldehyde	Original paper	Glue sized	Glue sized and sprayed with formaldehyde	Original paper	Glue sized	Glue sized and sprayed with formaldehyde
	Per Cent	Per Cent	Pts.	Pts.	Pts.	Dble. folds	Dble. folds	Dble. folds	Dble. rubs	Dble. rubs	Dble. rubs
100% Rag...	1.8	4.0	61.0	65.4	69.8	1873	2066	3692	22	30	219
Rope manila..	7.7	6.0	68.7	73.2	71.5	865	1130	825	147	255	381
Kraft	7.1	5.6	59.3	74.6	78.0	1570	2148	3012	39	65	233
Sulphite-soda.	6.6	4.2	26.6	31.5	30.6	19	61	37	64	64	79
Sulphite-soda (10% filler)	..	..	13.6	22.6	66.0	5	13	17	22	89	305

While the results noted are not entirely consistent owing to the relatively small number of samples treated and to variations in the papers used, they indicated the possibility of improving desirable qualities of various papers by suitable and specific sizing and after treatments. Similar laboratory experiments were made to study other variables of the tubsizing process as well as several types of other chemical treatments. These small-scale experiments expedited the observation of a considerable number of modifications of the sizing and after treatment processes and through eliminating the least promising, served as bases for larger scale work.

3. Typical Semicommercial Sizing Trial

In a typical semicommercial sizing trial, several different conditions of the sizing bath were used, with a uniform temperature of 114-118° F., and with uniform pressure at the squeeze rolls. Three papers were used, a 100 per cent rag, made in the Bureau

Fig. 2
Bureau of Standards Sizing Vat.

experimental paper mill, a commercial rope manila, and a commercial kraft. All papers, whether from a roll or in sheets, were

[9] Standard methods for testing glues: Industrial and Engineering Chemistry, 16, No. 3, pp. 310-315, March, 1924.

[10] Paper Testing Methods, Technical Association of the Pulp and Paper Industry, New York (1924).

[11] Griffin, R. C., Technical Methods of Analysis, Chapter III, p. 65. McGraw-Hill Book Co., Inc., New York (1921).

immersed for 5 seconds in the size. A medium grade hide glue was used throughout the trial. Each lot of freshly sized paper was divided into three parts; the first was air dried at room temperature of approximately 80° F. directly after sizing; the second was "wet packed" over night and was then air dried at room temperature; the third was "wet packed" over night, sprayed with a solution containing 10 per cent of formaldehyde and 25 per cent of glycerin, and then air dried at room temperature.

Data of the size bath conditions and the physical tests of the original and treated papers are given in Table 2.

The effects of changing the acidity or alkalinity of the sizing bath on the different amounts of glue absorbed by the papers, and on the consequent variations in the physical tests of the papers, were not sufficiently consistent in this trial to permit interpretation into generalities, but indicated clearly the need of control of this factor in the sizing operation. While accurate viscosity measurements of the sizing material were not obtained, the changes in viscosity due to changes in the reaction of the sizing bath appeared to be of magnitude comparable to the changes due to considerable variations in the temperature.

No especial difficulties were encountered in applying chemical after treatments by spraying the sized papers with formaldehyde and glycerin solutions. While the effect of these spray treatments was largely confined to the surface of the papers, the possibility was suggested of controlling changes in certain qualities of glue sized papers by varying different factors in the spraying operation. The results from spraying freshly sized papers with solutions of formaldehyde compared favorably with those obtained by applying this material in other ways, such as immersion in a bath or passing between felt rollers wet with it.

The improvement in strength expected by wet packing was not realized in most cases.

V. Results and Discussion

1. Retention and Penetration of Glue

The degree of penetration and the retention of glue as indicated by the wet-rub tests and nitrogen determinations, respectively, were found to be increased by factors that decrease the viscosity of the sizing solution. The method adopted in commercial practice, increasing the temperature of the sizing bath, varying the concentration of glue and adding different percentages of aluminum sulphate, were found to be susceptible to control within reasonable limits where a glue of known and uniform quality was used as the sizing agent. Small variations of the pressure of the squeeze roll had little if any effect on the amount of glue absorbed by the papers tried.

In observing the wet rub tests of surface-sized papers in which the paper is wet with water and rubbed by a weighted rubber surface, it was noted that whether or not the papers or sizing had been treated with glue hardening or softening materials there was a wide variation in the distribution of the glue sizing in various types of papers. The extremes of these variations were the papers in which the glue sizing was present only as a thin surface film and those in which the glue sizing was distributed uniformly throughout the sheet. It is obvious that the resistance of ledger and similar papers to repeated erasures is affected by the distribution as well as the total amount of glue sizing retained by the sheet. In checking commercial surface-sized papers by wet rub tests there was noted in some instances a marked "two sided" effect, that is, there was a sharp difference in the resistance to wet rubbing between the wire and felt sides of the same paper. In other cases these tests served to indicate that whether the glue sizing was largely retained on the surface

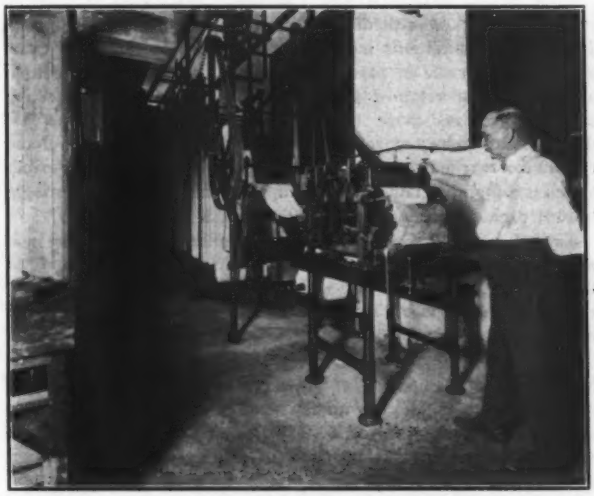

FIG. 3
Bureau of Standards Festoon Drier.

TABLE 2.—SIZE BATH DATA AND PHYSICAL TESTS OF ONE SERIES OF SEMI-COMMERCIAL SIZING TRIALS

Run No.	Paper	Size bath and paper data	Bursting strength			Folding endurance			Wet rub		
			Air dried Points	Wet packed Points	Sprayed Points	Air dried Double folds	Wet packed Double folds	Sprayed Double folds	Air dried Double rubs	Wet packed Double rubs	Sprayed Double rubs
	Rag No. 534....	Untreated	47	..	..	3616	....	.....	10	...	...
1	do	8% glue. pH = 6.5	76	53	64	6646	5062	12951	...	39	292
2	do	8% glue + 1% (on weight of glue) caustic soda pH above 8.8	79	84	90	6051	4405	8153	...	159	284
3	do	8% glue + 2% (on weight of glue) caustic soda..	82	91	83	6534	5169	10930	...	220	335
	Rag No. 535....	Untreated	43	..	..	5100	....	.....	8	...	...
4	do	Same as 3. Paper calendered	69	76	61	5657	6673	17099	...	45	376
5	do	5% glue + 2% (on weight of glue) caustic soda..	63	64	63	....	4300	9360	...	100	291
6	do	5% glue + 1% (on weight of glue) caustic soda..	65	74	61	.....	5508	9837	...	113	156
7	do	5% glue, pH = 6.5	77	79	67	....	.....	10088	...	102	75
8	do	5% glue + alum, pH = 4.7	69	72	65	4968	7034	7264	...	31	34
	Rope manila, 20% coniferous wood fiber, 80% manila and jute	Untreated	69	..	..	865	....	.....	147	...	...
9	do	Same as 1 above	78	90	92	801	720	1464	222	176	608
10	do	Same as 2 above	80	85	87	931	951	1325	214	248	787
11	do	Same as 3 above	84	94	88	760	871	1360	269	181	916
12	do	Same as 5 above	83	86	83	840	819	1394	226	151	639
13	do	Same as 6 above	79	85	81	939	922	1843	254	185	571
14	do	Same as 7 above	81	86	84	986	812	1795	379	345	397
15	do	Same as 8 above	88	89	77	924	1026	1687	283	238	499
	Kraft	Untreated	59	..	..	1570	....	.....	39	...	...
16	do	Same as 1 above	76	69	77	1504	1490	4565	62	46	581
17	do	Same as 2 above	67	83	68	1699	1944	4420	111	400	1173
18	do	Same as 3 above	74	84	75	1552	1248	5050	55	95	823
19	do	Same as 5 above	75	75	75	1860	2094	6237	88	59	716
20	do	Same as 6 above	71	79	77	1365	1339	4729	100	248	934
21	do	Same as 7 above	74	74	74	1388	1465	6259	145	126	841
22	do	Same as 8 above	74	64	63	2081	2079	7841	84	40	290

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of the paper or distributed through the sheet, the sizing was not entirely uniform.

Experiments with "wet packing" of the freshly sized papers gave inconclusive results as regards any obvious improvement in the desirable qualities of the paper through any change in the distribution of the glue retained. In commercial practice conflicting claims are made of the merits of this procedure, but in the limited number of trials made it appeared that the total amount of glue present in the papers and certain qualities of the papers themselves affected largely the possibility of improving the distribution of the sizing by this method.

2. Strength and Printing Qualities

Numerous trials with different types of papers and under different sizing conditions indicated that the several strength characteristics desirable in paper were affected markedly by the total amount of glue retained from the sizing process. The bursting strength and resistance to wet rubbing appeared to increase directly with increased retention of the glue whereas the folding endurance reached a maximum and then decreased with further amounts of glue retained. The improvements in strength sought by wet packing were generally not obtained.

Excessive improvement in strength obtained by glue sizing was generally accompanied by increasing difficulty in the printing of these papers. Whereas for writing with ink there is desired a relatively hard, glazed surface such as is obtained with rather heavy surface sizing or through the use of considerable amounts of alum in the glue solution, for printing processes in which the first step is the dampening of the sheets, such hard surface sizing is rather detrimental.[1] As an illustration there may be cited an experimental sizing trial of a 50-50 linen-cotton paper where the concentration of glue, proportion of alum, time of immersion, pressure of squeeze rolls, and drying conditions were constant but the temperature of the size bath was changed from 120° to 130° F. and then to 140° F. Tests showed a rapid increase in weight, glue retention and folding endurance with each increase of 10 degrees in the temperature of the sizing bath but this same paper although it printed perfectly when sized at 120° F. gave considerable difficulty when sized at 140° F. The amount of glue retained varied from 2 per cent at 120° F. to 5.5 per cent at 140° F.

Printing tests by the wet intaglio process on sixteen experimental papers that were sized in a number of different ways indicated that the plate printing processes can be adjusted to do satisfactory work on any one of a number of papers or sized surfaces but that the printing operation especially, after having been adjusted for any particular condition, is very sensitive to comparatively slight variations in the paper or in the sizing. Therefore if the printing processes are to be carried out on an efficient production basis, the paper and sizing should be as nearly uniform as possible, at least through the estimated day's production of a printing unit.

Wet packing of the tub-sized paper had no noticeable effect on its printing qualities.

From the printing standpoint, the use of alum in tub sizing is unnecessary; in fact the hardening of the glue film by the alum is really undesirable in the wet intaglio process. Alum is added to glue sizing primarily as a preservative and might be replaced by such materials as zinc sulphate or beta-naphthol which are efficient preservatives but do not have as much hardening effect on glue as alum does. Where resistance to surface wear is important in the printed product, this quality may be obtained by resizing and after treatment with formaldehyde.

3. Animal Size From Hide Cuttings

Glue jelly made at a fine paper mill from buffalo hide cuttings was used for comparative sizing experiments. No outstanding peculiarities of this glue as compared with the ordinary hide glue used in other experiments were noticeable during either the sizing process or the printing tests.

A sample of this glue was dried and tested by the standard methods of the National Association of Glue Manufacturers. These tests indicated that this glue was of only medium grade. The opinion is commonly expressed by fine paper manufacturers that a relatively high grade glue or technical gelatin should be used for sizing paper. Samples of hide cuttings glue prepared from different stocks by various fine paper manufacturers were tested for jell strength and viscosity by the methods mentioned and in all cases were found to lie between the medium and good grades of commercial glues.

Observations of glue making processes at different fine paper mills indicate that uniformity in the quality of the mill-prepared animal size can hardly be expected because of variations in the cooking procedure, quality of stock, etc., from day to day. It has been noted that uniformity in tub sizing is of real importance to the most efficient production of printing and this also holds true for converting processes such as the sensitizing of blue print and similar papers.

4. Special Treatments

In considering methods by which the resistance to wear of printed, tubsized, all rag papers might be increased, in addition to resizing the product several other processes were tested.

(a) Formaldehyde.—The addition of 1 per cent on the weight of glue of formaldehyde (actual 100 per cent formaldehyde) to the tubsizing bath seemed to have little effect on the bursting strength, folding endurance, oil or water resistance. Dipping the dry, tubsized paper in a 0.5 per cent formaldehyde solution increased the wet rub resistance markedly. Better results were obtained by applyng formaldehyde to undried, freshly sized paper. The formaldehyde treatment may be given satisfactorily by spraying. The wet rub tests indicated that the beneficial results of formaldehyde were not destroyed by immediate drying of the freshly sprayed sheets.

(b) Glycerin.—Glycerin additions to various types of papers were made in several ways, the spray method proving as satisfactory as any. The folding endurance of even waterleaf papers was markedly increased by treatment with glycerin but as noted under the heading "Permanency of tub sized paper" this increase was found to be temporary. The opinion is commonly expressed that the lubricating action of glycerin as shown by the increased folding endurance of papers treated with this material may be due partly to the hygroscopic quality of the glycerin. These experiments indicated however that the increase in weight of papers treated with glycerin checked very closely the amount of it added to the paper, that is, that no perceptible amount of water was retained by this reagent above that in the untreated paper. The addition of excessive amounts of glycerin caused difficulties through uneven drying and the formation of transparent spots in the paper.

Varnish and Lacquer.—Thin films of spar varnish were applied to printed tub sized papers by spraying. The oil resistance as well as the resistance to wet rubbing were markedly increased, but the folding endurance was decreased. Treatment with linseed oil gave results similar to those obtained with varnish.

Treatment with nitrocellulose lacquer increased the strength slightly without increasing the inflammability but made the paper sticky at high temperatures and brittle at low temperatures. The water and oil resistances were increased greatly, but when the paper was folded, the resistance to oil and water was no greater at the fold than that of the untreated paper.

In general, treatments with lacquers, oils, varnishes, albumen, etc., increased some desirable qualities, especially of the surfaces, of the papers, but also imparted other undesirable properties such as increased gloss, transparency, or brittleness. The amount of work with these materials has necessarily been limited and it has been suggested that through the choice of different solvents and suitable softening agents the objectionable effects may be avoided.

5. Permanency of Tubsized Paper

Through the courtesy of Helen U. Kiely, Chief Chemist of the

American Writing Paper Company, permanency tests of experimental tubsized papers were made by Gösta Hall, using the artificial aging method of testing. The results of these tests are given in Table 3. From these tests it appears that the beneficial effects

TABLE 3.—PERMANENCY TESTS OF PAPERS BY ARTIFICIAL AGING METHOD

Paper run number	Sizing treatment	Before aging: Bursting strength Points	Before aging: Folding endurance Double folds	After artificial aging, 48 hrs. heating at 100°C.: Folding endurance Double folds
1	Waterleaf	43	2746	2158
1	Tub sized, 8% hide glue	66	3115	3913
1	Tub sized, 8% hide glue, sprayed with 10% formaldehyde and 25% glycerin	67	11558	4777
1	Tub sized, 8% hide glue, with 2% NaOH on weight of glue, added to size bath	73	6020	3670
2	Tub sized, 8% hide glue, with 2% NaOH on weight of glue, added to size bath, sprayed with 10% formaldehyde and 25% glycerin	76	9527	4145
3	Waterleaf	35	4769	5105
3	Tub sized with 5% hide glue, 3.5% on weight of glue of aluminum sulphate, added to size bath	66	3225	4810
3	Tub sized with 5% hide glue, 3.5% on weight of glue of aluminum sulphate added to size bath, sprayed with 10% formaldehyde and 25% glycerin	67	7394	3400
4	Rosin sized	75	2234	2515
4	Rosin sized, sprayed with 10% formaldehyde and 25% glycerin.	75	4128	1754

on the folding endurance of paper from spraying with glycerin were only temporary. Save in the instance where sodium hydroxide was added to the sizing bath the increased strength obtained with glue appeared to be permanent.

VI. Summary and Conclusions

Preliminary studies of tub-sizing with animal glue have been made through a large number of laboratory experiments and semicommercial sizing trials. The major conclusions of the investigation so far are that with any given paper (See Table 4): (1) the bursting strength increases with increased retention of the glue; (2) the folding endurance increases with increasing glue content to a certain point and then decreases; (3) the resistance to water and to wet rubbing of glue-sized papers may be markedly increased by treatment with glue-hardening materials

TABLE 4.—TYPICAL EXAMPLES OF EFFECTS OF VARYING AMOUNTS OF GLUE ON DIFFERENT KINDS OF PAPER

Paper	Glue retained in paper %	Bursting strength Points	Folding endurance Double folds
A	0	52	101(a)
	2.37	76	482
	...	84	639
B	0	40	68(a)
	...	69	505
	1.66	74	658
	2.47	76	695
	2.73	85	550
C	1.66	66	2312(b)
	2.01	65	2258
	2.86	63	2591
	3.44	74	1944
	4.25	72	1840
D	3.18	70	2612(b)
	3.75	74	4581
	4.26	76	4144
	5.05	63	2120
	6.47	71	1180
E	2.21	69	3400(b)
	2.73	71	4135
	3.51	77	4890

(a) Folding endurance test strips under 1.5 kg. tension.
(b) Folding endurance test strips under 1.0 kg. tension.

such as formaldehyde, but such treatment requires careful control, lest the folding endurance be adversely affected; (4) the folding endurance of unsized, rosin-sized, and surface-sized papers, whether or not hardening agents have been used, may be increased by the addition of certain softening agents or lubricants, such as glycerin or nondrying oils; and (6) a limited number of tests check outside opinions that the effect of glycerin treatments, as ordinarily applied, on the folding endurance of paper is comparatively short lived.

Printing tests by the wet intaglio process of experimentally tubsized papers indicate (1) that uniform surface-sizing is of primary importance for the efficient production of printing and (2) that tubsizing with glue prepared from buffalo hide cuttings does not produce papers that differ noticeably from those tub sized with commercial glues.

It would appear that the use of uniform commercial glues of known characteristics should aid in maintaining control of some of the variables of the tubsizing process. The successful use of the standard glue-testing methods by the Government Printing Office in their specifications for glues used in printing and binding processes, suggests the possibility of drawing specifications for commercial tubsizing glues to meet the local requirements of individual mills.

This preliminary study shows that in the application of tubsizing and other chemical treatment processes to different types of papers, there is required a broad study and exact knowledge of all the factors involved in order to control the improvement of qualities of papers along desired lines. It is hoped that the further study in progress will result in definite data on some of the fundamental problems related to the technology of surface sizing as there is a marked lack of such data in the literature of paper making. Comments and constructive criticism of the work to date are invited and suggestions for future work will be welcomed.

Cochrane, Ont., to Have News Print Mill

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ont., November 29, 1926.—Cochrane, an enterprising town in Northern Ontario on the line of the Temiskaming and Northern Ontario Railway, is to have a new 200 tons news print mill, which will employ between four and five hundred hands, exclusive of woods operations and the pay roll will approximate $650,000 annually.

This announcement has just been made, on behalf of the Ontario government, by the Hon. Charles McCrea, Minister of Mines in the provincial cabinet. The new plant will be built by the Abitibi Power and Paper Company, Iroquois Falls, which now owns and operates a 550 ton daily news print mill and is undertaking a program of expansion. Cochrane is surrounded by a country rich in pulpwood supplies and is the headquarters of a number of contractors in that line.

Construction on the new mill will be begun as soon as plans and details can be completed and negotiations for the establishment of the industry have been going on for some time between Alexander Smith, President of the Abitibi Power and Paper Company, and the Hon. G. Howard Ferguson, Premier of Ontario. The announcement of the new mill at Cochrane is being received with a great deal of satisfaction throughout that section of the country.

Improved Shipping Facilities at South Haven

[FROM OUR REGULAR CORRESPONDENT]

SOUTH HAVEN, Mich., November 26, 1926.—The British steamer *Hill Brook*, bringing china coating clay from the Cornish mines, recently sailed on her return trip to England. The *Hill Brook*, besides the *Errington Dunford* and the *Hill Glenn*, have completed trips to South Haven with clay for the Michigan markets.

South Haven has completed unloading facilities and dock space for several vessels at a time and the harbor now has a depth of twenty feet, dredging having just been finished. With this depth, full cargoes of any vessel that can come through the Welland Canal can unload at South Haven. There is also a great deal of interest in the pulp movement through this port, and the *Spruce Bay*, a Montreal ship, delivered a cargo at South Haven a few months ago.

Side Lights on Rosin Production*

E. J. Turner, Western Paper Makers' Chemical Co.

The use of rosin for sizing paper became of interest to the paper mill chemist in 1806, when Ilig, a German, discovered that a solution of rosin soap added to the beater and precipitated with alum gave a sheet of paper which compared very favorably with that produced with glue and gelatin, which up until that time were the sizing agents commonly used. In addition, this new rosin sizing gave certain other qualities which could not be obtained with the previous materials. Since that time various attempts have been made to find a satisfactory substitute for rosin, and while materials have been found that may do part of the work, or which may add something to what is done by it, rosin still remains the most important sizing agent in paper manufacture.

We are accustomed to seeing rosin used in the paper industry and possibly have overlooked some of the other important uses. It has been reported that there are over one hundred uses of rosin, some of which are interesting in themselves, and some on account of the influence they have on the market price of rosin, which in turn is reflected in the cost of making paper. The soap, paper and the varnish industries are the chief consumers of rosin.

Rosin also finds a use in printing inks, electrical insulation, linoleum, oilcloth, iron and steel, and so on down to the rosin which is used on violin bows. Even shoe polish is reported to require 100,000 barrels of turpentine each year, and we cannot consider rosin without considering its by-produce, turpentine, for these two must necessarily go hand in hand.

Turpentine was just mentioned as a by-product of rosin manufacture, although there is some question which is the product and which the by-product. As a matter of fact, it is not so many years ago that rosin was considered the by-product and was actually thrown away. It was not an uncommon thing to build the refinery near some lake so that the worthless rosin could be allowed to flow into the water, thus saving the cost of disposal. Rosin has since risen to such value that it has been mined from many of these old lakes and at present the rosin end of the industry surpasses that of the turpentine in value.

History of Rosin Industry

To get the proper viewpoint of the rosin industry as a whole, it is necessary to go back and consider something of its history, and learn the meaning of the various terms and customs which are in existence. The industry is very commonly referred to as the Naval Stores industry, and this is due, no doubt, to the importance which the pine pitch, tar, and turpentine played in the calking of the vessels of the navy back in the days of wooden ships.

One outstanding custom which has come down to us from the past is that of quoting prices on a unit of 280 pounds, which by way of explanation is one-eighth of an English ton. For years rosin has been packed and sold in 500 pound barrels, but the price is still quoted on this ancient basis of 280 pounds per barrel, which as can readily be seen requires a great deal of calculation and causes endless confusion.

Another custom which is misleading is that of selling gross for net. In other words, the customer pays for the barrels at the same price as the rosin itself. The staves compose from 18 to 25 per cent of the total weight, and it is evident that the consumer is paying for 70 pounds or 80 pounds of pine wood with each barrel at as high as 4 or even 5 cents per pound.

Before the discovery and settlement of America, France was the leading producer, but the naval stores industry was one of the first established on this continent, and production grew rapidly until now we supply about 65 per cent of the world's rosin. France is second with about 25 per cent, and the remainder is supplied by Spain, Portugal, Greece, Mexico, and India, in the order mentioned.

Changes in Relative Production

By states we find some very interesting changes in the relative production, and while North and South Carolina formerly produced the majority of rosin and turpentine, they now produce practically none. Texas, Louisiana, and Mississippi have also ceased to be of any importance, but Georgia on the other hand is becoming the leading producer.

As far as the different states are concerned, we find that they rank as follows:

Georgia	43 per cent
Florida	26 per cent
Alabama	6½ per cent
Mississippi, Louisiana and Texas	12 per cent
North and South Carolina	2 per cent

In actual production the American crop reached its peak in the season ending in April, 1909, with 2,500,000 barrels of rosin. Since then it has gradually decreased until the crop of the last year was somewhere in the neighborhood of 1,750,000 barrels. It seems certain that the crop is going to continue to decrease in the next few years until it has stabilized at about 1,300,000 barrels. After this the effects of reforestation will be felt appreciably, and the production will no doubt begin to rise.

The details of manufacture can be passed over somewhat hurriedly as it is generally known that rosin and turpentine are made by distilling the pitch or gum which oozes from the freshly cut surface of the long leaf yellow pine. In passing, it might be mentioned that the gum starts to flow in the middle of March and that the production is usually completed by the middle of November. The flow increases of course during the warmer months.

The yearly production of one tree varies with the size of the tree, but on the average is considered to be about 5 pounds. It is necessary for the workman to visit this tree once every week during the entire season to make a fresh cut on the surface of the tree, thus building up what is known as the face. The gum has to be collected at least once every month, and this means that each tree is visited from 30 to 40 times to get 5 pounds of rosin, which at prices prevailing in times past would bring the producer about 10 or 15 cents at the most.

The period of profitable operation of a tree under past methods has been about 4 years, although in some cases the trees are operated 8 or 10 years, after which they are cut and manufactured into lumber. Figuring on this basis the paper mill uses practically the entire life production of one tree every time a beater of paper is sized.

In France a very different method is used, and while trees are good for perhaps 10 years at the most in our country, they have been known to last 50 years in isolated cases. The far-seeing producers in this country are gradually turning to a modified French process which gives promise of much longer life.

In the process of distillation the turpentine and water are distilled off and separated, and what is left in the still is

* Address before the Kalamazoo Division of the Cost Association of the Paper Industry.

melted rosin. This is then drawn off into barrels through a screen on which is usually placed a layer of cotton batting, which is supposed to take out the majority of the dirt, bark and sticks, giving the rosin as we see it.

Grading of Rosin

Before going further, this may be a good time to discuss the grading of rosin, and to mention some of the factors which determine the grade. As you probably know all rosin is graded and sold by color. The various shades of color range from black to water white, and are indicated by letters—B, D, E, F, G, H, I, K, M, N, WG, WW. These color standards are furnished by the U. S. Department of Agriculture, and the inspector cuts a 7/8 inch cube from each barrel which he then compares with the standard colors. If he finds that the rosin being tested compares with the F standard, the barrel is then marked F and is sold as F regardless of the chemical properties of the rosin. This should be interesting to the paper mill chemist, as it is evident that such grading gives very little indication of how the particular rosin is going to act as far as sizing paper is concerned.

An illustration of this is the consideration of unsaponifiable matter, which is known to vary from as low as 3 up to 25 per cent. It is evident to the chemist that if he starts to make rosin size with rosin containing 25 per cent of unsaponifiable matter, the resulting product will be very different from what it would be if the rosin contained only 3 per cent unsaponifiable matter.

There are several factors which influence the color of rosin, and it has been found that as a rule the new young trees produce paler rosins than do older trees. In the same way the first year's production of a tree normally gives a paler rosin than does the second or third year. The grades of rosin even vary somewhat during the course of a season, and are paler at the start than they are later on. Part of this is due to the fact that as the year progresses the face cut on the tree gets larger and larger, so that the fresh gum has to flow a greater distance down the face and is thus exposed to the sunlight and heat for a long time.

Another factor which influences the color of rosin is the control of the heat during the distillation process, and it is well known that improper heating can spoil a batch of rosin, and turn what nominally would be a pale rosin into a dark rosin. This fact is leading the more progressive distillers to use steam distillation and to use recording thermometers so that the actual process of distillation can be very carefully controlled. They have found that this more than pays for itself owing to the fact that the paler rosins usually sell at higher value than the dark ones.

The Rosin Market

The rosin market is something which we hear a great deal about, with its daily fluctuations, and it may be interesting to go into this a little. To understand the situation thoroughly it is necessary to go back to the tree itself and follow the rosin through the various channels. To begin with, the producer is known as a "turpentine operator," or a "turpentine farmer," or in some cases simply as an "operator." In a very few cases he works his own timber, but as a rule he is a man of limited means and leases the right to work the timber owned by somebody else. He commonly takes over what is known as a crop of 10,000 cups, and the acreage required for a crop will vary with the type and age of the tree. In some territory the crop is figured to be about 300 acres, although in other areas it is considerably less.

After the operator has collected and distilled the gum and put the rosin into barrels, it is shipped to what is known as a "factor." He is usually the man who has financed the operator and he acts as his agent, controlling the sale of the operator's output. He usually holds a mortgage on the lease and plant of the producer, so that the producer is forced to sell through him on commission. When the rosin arrives at the principal ports of Savannah, Jacksonville, Pensacola, etc., it is delivered to the naval stores yards and turned over to the official state inspectors, who grade and weigh the barrels. The grade and weight are marked on each barrel, and a certificate furnished to the "factors."

The "purchasers" and "distributors" of rosin are known as "dealers" or buyers. The "factor" supplies a list of the grades and weights which he has to offer, and one of the requirements is that the dealer shall buy the entire line which is offered. In other words, if a dealer wishes to buy a few grades, he has to bid on the entire line.

Situation at Savannah

Considering the situation at Savannah, the Board of Trade meets at 2 p. m. every day, Sundays and holidays excepted, and at that hour the factors and dealers meet and the dealers hand in sealed bids for the entire lines in which they are interested. These bids are opened by the committee, and are read aloud, and the various lines go to the highest bidder, providing of course the factors accept the offer. A committee made up of three factors and three dealers is known as the quotation committee, and these men study the various bids and announce the quotations for that day. These are then posted, and are published in all of the leading financial papers, and comprise the so-called "Savannah market."

Unfortunately, the ultimate consumer is usually unable to buy his supply of rosin at the published market, as the dealer naturally asks a premium which varies depending on the temporary demand. Nevertheless, the Savannah market serves as a valuable guide.

Russian Pulpwood for U. S. A.

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 29, 1926.—The recent visit to the Soviet Union of Hilton U. Brown, for many years general manager of the *Indianapolis News*, has resulted in a discussion in the Soviet Press of the future possibilities of supplying the United States with an increasing quantity of pulpwood for news print paper, according to the Russian Information Bureau. Mr. Brown was interested in this problem.

According to *Economic Life* (Moscow) the United States imported last year 1,800,000 tons of pulpwood, mostly from Canada. The normal rate of growth in the pulpwood forests of the Soviet Union is estimated at about 4,910,000 tons yearly, of which only a negligible amount, about 15 per cent, is exploited. Pulpwood exports of the Soviet Union are at present about 330,000 tons per year. Foreign capital would be needed to develop the industry.

"At present," says *Economic Life*, "our pulpwood growth is being exploited only in regions economically accessible. But even within these regions there are enormous pulpwood reserves. It is clear that under certain conditions we could furnish a considerable part of the pulpwood material the United States must import. The chief question is that of price.

"It is necessary to consider the question, not only from the point of view of the export of pulpwood, but of the semi-manufactured product namely, chemical and mechanical pulp. The export of this would be more practicable not only for us, but probably for the United States.

"For this, of course, capital is needed which at present the USSR can not supply to a satisfactory extent. This opens up the problem of attracting foreign capital for the erection in our country of mechanical and chemical pulp factories. It seems to us that American capital could quite profitably work in this direction, and from this point of view there should be started a solution of the problem of supplying the United States with raw material necessary to her paper industry."

Current Paper Trade Literature

Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts of Literature of the Technical Association of the Paper Making Industry

Clarence J. West, Chairman

Lubrication

Characteristics of Full and Partial Journal Bearings. H. A. S. Howarth. Ind. Eng. Chem. 18, 453-460 (May, 1926). The types of bearings to which the article applies are: (1) Bearings bored with running clearances; (a) full or complete bearings, (b) central partial bearings in which the lines of action of the resultant load bisects the bearing angle, (c) offset partial bearings in which the line of action of the resultant load intersects the bearing surface usually more than half way from the leading edge; (2) bearings fitted carefully to the journal; as no running clearance is allowed these bearings must be less than 180° long in order to function. These types are studied graphically in order to provide a complete and thorough set of fundamental laws which must govern the actual lubrication of all plain journal bearings. The bearing characteristics as given in the article represent ideal conditions in that they show the maximum film thickness which may be realized for a given load. These laws may serve as a guide in the study of actual bearings in which such factors as end leakage and surface roughness play a modifying part and prevent the carrying power from being as great as in the ideal case. As an example of the use of these laws is cited the question as to the advantages of employing two or more pivoted segments instead of a single partial bearing to support a journal. It can readily be shown that the film is the thinner in the case of the bearing of two segments, the total arc of each bearing and other conditions being equal. In a similar manner a three-segmented bearing is inferior to one of two segments. It is quite probable that many bearing problems may be solved, at least approximately, by the graphical method once its usefulness and limitations are thoroughly understood.—A.P.-C.

The Role of Oiliness in Industrial Lubrication. W. C. Wilharm. Ind. Eng. Chem. 18, 463-467 (May, 1926). The importance of efficient lubrication is outlined and the mechanism and possibilities for improving this vital factor as it especially applies to electrical machinery and such other types as are not subjected to high temperatures are discussed. The property of oiliness is considered as a means of improvement and after a brief review of the literature a modified inclined plane is described as a method of measuring this property. A number of determinations were made with a brass plate and steel slider lubricated with several typical lubricants. An analysis of the results shows a difference in the lubricating value of various lubricants that is not shown in the tests usually made and throws more light on the mechanism of the property of oiliness.—A.P.-C.

Some Little Understood Factors Affecting Lubrication. E. G. Gilson. Ind. Eng. Chem. 18, 467-470 (May, 1926). Changes in friction cannot always be satisfactorily explained by changes in viscosity of the oil due to a change of its temperature. Oil-film friction is shown to be influenced by change of one of the metals between which the film is working, and also by changing from an oxidizing to a non-oxidizing atmosphere. It is demonstrated by means of a complete bearing within an enclosure how the friction is affected by the atmosphere surrounding the bearing. In conclusion it is pointed out that the facts shown cannot be explained by the viscosity-temperature changes of the oil, and it is suggested that efficient lubrication may be dependent upon a reaction between the metals of the bearing and the oil, the nature of this reaction being influenced by the atmosphere in which the bearing is operated.—A.P.-C.

Surface Action and Fluid Film Lubrication. Some Film Thickness Measurements. A. E. Becker. Ind. Eng. Chem. 18, 471-477 (May, 1926). To obtain fluid film lubrication there must be adequate adhesive forces between the lubricant and the bearing surfaces. This indicates four general types of bearing combinations. As there is no known method for measuring these adhesive forces, the writer has devised apparatus for measuring the film thickness developed. This apparatus is described and data for four oils and four bearing combinations are presented. The general equation for film thickness in terms of load, speed and viscosity is found to be

$$t = K\left(1-\frac{\log P}{A}\right)\left(1-\frac{\log S}{B}\right)\left(1-\frac{\log \mu}{C}\right)$$

where K, A, B and C are constants depending upon surface action forces.—A.P.-C.

Lubricating Value as Related to Certain Physical and Chemical Properties of Oils. L. W. Parsons and G. R. Taylor. Ind. Eng. Chem. 18, 493-496 (May, 1926). The selection of the best lubricant for a particular service cannot always be made on the basis of the common physical and chemical tests. Many specifications covering various types of lubricating oils are based on insufficient data as to the effect of variations in these tests, and either impose unnecessary restrictions or omit essential requirements. In the article there is given a brief review of the theory of lubrication and a discussion of the application of this theory to a few special cases, with particular reference to the value of certain tests.—A.P.-C.

The Role of Graphite in Lubrication. F. L. Koethen. Ind. Eng. Chem. 18, 497-499 (May, 1926). The article describes tests on a Riehle machine to determine the amount of pressure required to rupture the fluid film in a 3-inch bearing rotating at constant speed, and measurements of the coefficients of friction of weighted sliders, in each case using oil with and without suspended graphite. Both methods of test showed that under conditions of ruptured film lubrication with some solid-to-solid contact, the presence of graphite substantially reduced the friction. This is probably because it deposits to a certain extent in the low places of the metal, thus making a smoother surface, and also because when solid-to-solid contact does take place, it abrades more readily and with less friction and damage than would plain metal surfaces.—A.P.-C.

Comparison of Lubricating Efficiencies of Oils and Some of Their Physical and Chemical Properties. M. V. Dover. Ind. Eng. Chem. 18, 499-501 (May, 1926). The following properties of three mineral oils and one vegetable oil (olive oil) are compared: Iodine number, acid number, flash point, specific gravity, viscosity, surface tension, interfacial tension, and efficiency as lubricants. A brief study is made of the clogging effect of iron or steel capillaries by two of these oils, as suggested by previous work by Wilson and Barnard.—A.P.-C.

Miscellaneous

Paper Mill Ventilation. S. W. Fletcher. Paper Ind. 8, 271-275 (May, 1926). Outline of the development of modern methods of paper machine room ventilation.—A.P.-C.

The Trailer in Paper Transport. S. K. Hargis. Paper Ind. 8, 248-249 (May, 1926). Brief discussion of the advantage of the trailer and semi-trailer in paper mill and stock house transport.—A.P.-C.

Improved System of Shipping Paper. Paper Ind. 8, 277 (May, 1926). Brief description and outline of the advantages of the Gerrard Uni-Lastic Stowage system.—A.P.-C.

Practical Water Testing for the Paper Maker. T. C. Bentzen. Paper Ind. 8, 431-434 (June, 1926). A simple description of the methods of determining turbidity (qualitatively and quantitatively), hardness and iron (qualitatively and quantitatively). —A.P.-C.

New Apparatus for the Determination of Carbon Dioxide in Flue Gases. Caillot. Rev. Ind. Minerael (Jan. 15, 1924); Genie Civil 84, 415 (1924). As the carbon dioxide content of the flue gases increases, their heat conductivity decreases. Two platinum wires, one in the air and one in the flue gases, are heated by the same electric current. The wire in the flue gases gets hotter as the carbon dioxide increases and its resistance increases. The amount of carbon dioxide and the resistance therefore vary similarly. A recording galvanometer is used—A.P.-C.

Removing and Preventing the Formation of Boiler Scale by Ionization Phenomena. F. Venneman. Mon. Papieterie Belge 6, 229-233 (April, 1926). Formation of a hard adherent scale in boilers is due to porosity of the steel boiler shell which firmly holds the material deposited from the water, and to orientation of the deposit in a direction at right angles to the shell. The formation of scale can be prevented, and scale already formed can be softened and removed by means of an electric current sufficient to cause an ionization of the water without causing an electrolytic decomposition of the water or of the dissolved salts. In a De Naeyer boiler with a heating surface of 250 sq. m. and an evaporation of 7 cu. m. per hour with an input of about 46 watts a layer of scale about 6 to 8 mm. thick was completely removed in the course of a few months, and no further scaling was observed, even when the water in the boiler had reached a hardness of 400°.—A.P.-C.

Pulverized Coal. H. G. Barnhurst. Pulp & Paper 24, 637-639 (June 3, 1926). Description of the method of using pulverized coal, of its development in the course of the last few years, with an outline of its advantages.—A.P.-C.

Pumping Paper Stock. E. F. Doty and M. M. Klosson. Pulp & Paper 24, 757-760 (July 1, 1926). A discussion of the effects of stock consistency on the performance of pumps.—A.P.-C.

Cutting Handling Costs with Electrical Trucks. Harold J. Payne. Paper Trade J. 82, No. 23, 59-63 (June 10, 1926); Paper Mill 49, No. 25, 12, 42-46 (June 19, 1926). A survey of the performance and operation of electric industrial trucks in a number of American Paper Mills.—A.P.-C.

Steam and Electric Driving in Paper Mills. W. Hargreaves. World's Paper Trade. Rev. 85, 652-658 (Feb. 26), 770-774 (March 5, 1926). A general survey of the subject, bringing out the advantages of extraction engines.—A.P.-C.

Protection of Steam Boilers Against Scale and Corrosion. R. Caillol. Chaleur et Indus. 6, 357-362 (Aug.), 419-424 (Sept.), 469-474 (Oct., 1925); Papier 28, 1087-1092 (Oct.), 1203-1206 (Nov., 1925); 29, 161-165 (Feb.), 273-280 (March), 393-397 (April), 493-502 (May, 1926). A review and discussion of the relative merits and drawbacks of the various processes of feedwater purification and of protection of the inside of boilers against scaling and corrosion.—A.P.-C.

Paper and the Paper Industry. C. H. Smith. Pulp and Paper 24, 737-741 (June 24, 1926). A concise summary of the history of the development of the industry in Canada.—A.O.-C.

Some Fundamental Problems in Pulp and Paper Making. Bjarne Johnsen. Pulp & Paper 24, 669-672 (June 10, 1926). By means of a few practical examples the author brings out the necessity for very extensive research of a fundamental nature on the raw materials used in the industry and on the processes in which these materials are used.—A.P.-C.

Some Present Day Problems of the French Paper Industry. Maurice Brot. Papier 29, 505-516 (May, 1926). A general discussion of the present position of the French Paper industry, more particularly as affected by geographical distribution, customs tariff and freight rates, and cost of production. The means to be taken for reducing the cost of production are summed up as follows: (1) reduction of the cost of raw materials by manufacturing pulp in France; (2) reduction in the cost of steam; (3) improvement in pulp and paper making machinery by cooperation between equipment manufacturers and paper mills; (4) close cooperation between the mills and an institution for training skilled paper mill workers and forming competent paper mill engineers and technologists.—A.P.-C.

The Old Paper Mills of Auvergne. Jeanne Lichnerowicz. Papyrus 7, 255-259 (April, 1926). Historical notes.—A.P.-C.

Bengal Paper Mills, Ltd., Raneegunj, India. T. Venkajee. Paper Trade J. 82, No. 19, 57-58 (May 13, 1926). Brief description of the process and equipment.—A.P.-C.

Paper Research Literature, VII (Revised). 1st Supplement. C. J. West and B. W. Scribner. Paper Trade J. 82, No. 20, 49 (May 20, 1926). A list of the contributions by members of the U. S. Bureau of Standards, Department of Commerce, during 1925.—A.P.-C.

Box Board Thickness. Pulp and Paper 24, 611-614 (May 27, 1926). Discussion of the advantages to producer, dealer and consumer resulting from simplification, with the simplified list of thicknesses recommended by the U. S. Bureau of Standards and representatives of manufacturers, distributers and users.—A.P.-C.

Packing Paper Reels. World's Paper Tr. Rev. 85, 1770, 1772 (June 4, 1926). Brief illustrated description of the Ljungstrom patent paper roll packing machine.—A.P.-C.

A.B.C. of Hydrogen Ion Control in Paper Manufacture. W. A. Taylor, Paper Mill 49, No. 23, 30, 32, 50 (June 5, 1926). Brief explanation of the importance of hydrogen ion concentration in paper making, particularly in sizing, and of its determination by means of the Lamotte Hydrogen Ion comparator.—A.P.-C.

Cellulose

Action of Heat on Cellulose. J. W. Bain. Pulp & Paper 24, 783, (July 8, 1926). Absorbent cotton extracted for 7 days with boiling water was heated for 3 hr. in an electric oven at 200° C. After heating, the uniformly brown-colored cotton was again extracted with boiling water, the extract concentrated and decolorized with animal charcoal, a syrupy liquid remaining. The cotton lost, in one case, 5% in weight, and 3.36% syrup was the average quantity obtained from 9 lots. Optical determinations indicated 7.5% and reduction with Fehling solution 13.6% glucose in the syrup. Pentoses and methylpentoses were absent and hexoses other than glucose were not found. Formic acid and probably small amounts of acetic acid were present. The volatile products are to be studied next.—A. P.-C.

Future Trend of Cellulose Chemistry. G. J. Esselen, Jr. Ind. Eng. Chem. 18, 1031-1034 (Oct. 1926). A discussion of the probable trend of future investigations and progress in the field of cellulose chemistry.—A. P.-C.

Determination of Cellulose and Wood Fiber in Paper. O. M. Halse. Papir-Journalen 14, 121 (1926) Chemical Abstracts 20, 3082. One gram of air dry paper is soaked in 50 cc. 38% hydrochloric acid, 5 cc. concentrated sulphuric acid added, the mixture shaken occasionally for several hours and diluted with water to 500 cc. and brought to boiling. The undissolved lignin is filtered off, washed and dried to constant weight. The weight of lignin is a measure of the wood fiber in the ash-free paper. Papers containing a filler, such as China clay, require a determination of the amount of the filler (which should be subtracted from the apparent weight of the lignin) by igniting the lignin and weighing the ash. China clay leaves 88% of its weight as ash. A series of determinations of lignin in mixtures of sulphite cellulose and lignin varying from 0 to 100% can be plotted and the per cent of wood fiber, corresponding to the experimental weight of lignin found in samples, read directly.—C. J. W.

Lignin

Chemistry of Lignin. Peter Rusnev. Centralbl. Gesam.

Forstw. 49, 281-294 (1923). The work of various investigators on the origin, composition and determination of lignin in wood is summarized as follows: Lignin is probably synthesized from the pentosans and hexosans and is probably in chemical rather than merely mechanical combination. It is not a uniform substance but in woods of conifers probably consists of alpha and beta lignin in the ratio of two to one. It may be a derivative of coniferyl alcohol; in conifers alpha lignin probably consists of 2 molecules of coniferyl aldehyde and beta lignin of 1 molecule of coniferyl aldehyde and 1 of caffeic acid. The lignin content of wood varies within rather narrow limits (broad leaved species, 20 to 26%; conifers, 28 to 29%). The so-called lignin color reactions are not lignin reactions, but merely show the degree of purity of cellulose. Quantitative determinations by the methoxyl method are impossible. A long list of references is cited.—C. J. W.

Constitution of Spruce Lignin. Peter Klason. Svensk Pappers-Tid. (Dec. 15, 1925); Pulp & Paper 24, 965-967 (Aug. 19, 1926). The author takes exception to some of the findings of Dorée and Hall (J. Soc. Chem. Ind. 43, 257-263T (1924); 44, 270-274T (1925)) and corroborates the work of Tilghmann regarding the action of sulphurous acid on vegetable fibers.—A. P.-C.

Raw Materials

Madagascar Palms as Papermaking Materials. F. Heimde Balsac, M. Cercelet, J. Mahen, G. S. Dagand and R. Heim de Balsac. Bull. Agence Gen. Colonies 19, 23 (1926); Bull. Imp. Inst., 24, 266-267 (Aug. 1926). Separate investigation of the stem, petiole and lamina of "Satrabe" (*Medemia nobilis* Hild. and W. Drude) and "Satramira" (*Hyphaene schatan*, Boj.) gave the following results (analytical results are on the dry basis, except moisture; pulping was carried out with caustic soda solution under pressure, but the cooking conditions are not specified):

	Satrabe			Satramira		
	Stem	Petiole	Lamina	Stem	Petiole	Lamina
Moisture %	7.84	9.36	9.05	8.19	10.25	9.42
Ash %	5.30	6.84	7.00	5.83	6.22	6.43
Fats and Waxes %	1.00	0.70	0.64	1.10	0.96	0.72
Cellulose %	79.15	75.40	66.20	68.32	70.08	60.00
Fiber length (mm.)	0.8	0.8	0.5	1.0	0.5	1.0
Minimum	0.025	0.010	0.101	0.020	0.010	0.010
Maximum	1.0	1.7	1.5	1.7	1.4	2.0
Average						
Fiber diameter (mm.)—						
Minimum	0.025	0.010	0.101	0.020	0.010	0.010
Maximum	0.050	0.020	0.020	0.035	0.020	0.020
Average	0.040	0.015	0.015	0.030	0.015	0.015
Felting Power	0.04	0.009	0.010	0.018	0.011	0.008
Yield of Bleached Pulp %	31	26	22	29	28	22

The pulp from Satrabe stem furnished a paper of inferior quality which could be used only as a filler; the two parts of the leaf, on the other hand, gave papers of good quality, and, in spite of the low yield, would be of definite interest for paper making. Each of the three parts of Satramira gave a pulp which furnished paper of an average quality; the yield is rather low in the case of the lamina, but the whole plant would be of interest as a raw material for paper making.—A.P.-C.

Doum Palm (Hyphaene Thebaica, Mart.) As a Papermaking Material. F. Heim de Balsac, M. Cercelet, J. Maheu, G. S. Dagand and R. Helm de Balsac. Bull. Agence Gen. Colonies 18, 1038 (1925); Bull. Imp. Inst. 24, 264-265 (Aug. 1926). Papermaking trials were made with the wood and with the leaf (both petiole and lamina) of palms from Goundan and Issa-ber districts of the French Soudan. Analysis of the wood gave the following results, calculated to the dry basis (moisture 11.09%): ash 1.21%, fats and waxes 1.05%, cellulose 48.80%, lignin 48.94%. The lamina contained 10.75% moisture and gave the following results on the dry basis: ash 17.63%, fats and waxes 0.76%, cellulose 27.70%, lignin 53.91%. On digestion with caustic soda under pressure the wood furnished a dark brown pulp and the leaves (petioles and lamina) a pulp of a lighter tint; both pulps bleached fairly easily but that from the wood less easily than from the leaves. The yield of bleached pulp from the wood amounted to 35% and that from the leaves to 27%, both expressed on the dry raw material. On microscopical examination the pulp in each case was found to be composed of cylindrical, regularly tapering fibers, with a lumen of variable size. The fibers of the pulp from the wood varied in length from 0.8 to 1.5 mm., with an average of 1 mm., and had a diameter of 0.025 to 0.045 mm., with an average of 0.030 mm.; those of the leaf pulp ranged from 0.8 to 2 mm. in length, with an average of 1.5 mm., and in diameter from 0.010 to 0.025, with an average of 0.015 mm. The felting powers (diameter, length) are 0.03 and 0.013, respectively. The paper made from the pulp obtained from the wood was of inferior quality, while that from the leaves was of good quality, but the yield in the latter case was rather low.—A.P.-C.

"Matsia" Grass (*Sporobolus Pryamilalis, Beauv*) As a Papermaking Material. F. Heim de Balsac, M. Cercelet, J. Maheu, G. S. Dagand and R. Heim de Balsac. Bull. Agence. Gen. Colonies 18, 1244 (1925); Bull. Imp. Inst. 24, 265 (Aug. 1926). "Matsia" grass from Madagascar, containing 9.52% moisture, showed on analysis (on the dry basis): ash 6.43%, fats and waxes 1.00%, cellulose 45.31%, lignin 47.26%. Digestion with caustic soda under pressure gave a pale gray pulp which was easily bleached giving a yield of 29% on the dry raw material. On microscopical examination the pulp was found to consist of fibres and a fairly large proportion of cellular tissue and fragments of vessels; the fibers were fine, of cylindrical form, and had the following dimensions: length 0.5 to 4 mm., average 2 mm.; diameter 0.005 to 0.012 mm., but mostly about 0.005 to 0.0006 mm. The felting power (diameter: length) was 0.003. The pulp furnished a paper of good appearance and of excellent strength and durability. The results indicate that the grass can give a pulp of good quality, but in rather low yield. It is suggested that a semi-pulp could be prepared on the spot and thus reduce the cost of transportation to a minimum.—A.P.-C.

Manufacture of Lignone Derivatives and Their Application. C. F. Cross and A. Englestad. Eng. pat. 248,834.—New lignone derivatives are obtained by the action of acid condensing agents, e.g., hydrochloric acid, either alone or in the presence of phenolic compounds, or lignone or its derivatives, more particularly those sulphonated derivatives resulting from acid digestion of lignocellulose by the processes described in Eng. pats. 202,016 and 220,002. The lignone derivatives may be used in the dyeing industry, or as a basis for the manufacture of writing or printing inks.—A. P.-C.

Manufacture of Non-Deliquescent Solid Material from Sulphite Waste Liquor. A. G. fur Anilin-Fabrikation. Eng. pat. 251,019, Jan. 23, 1925.—Hygroscopic material present in sulphite waste liquor is separated by dialysis, is decomposed in the liquor, or is rendered non-hygroscopic by neutralization, or the ligninsulphonic acid is precipitated free from hygroscopic material. For example, waste liquor from which iron and calcium compounds have been removed is treated at 100° C., with sodium hydroxide solution of specific gravity 1.357. After some time the liquor is neutralized with hydrochloric acid, and non-hygroscopic constituents are precipitated by the addition of salt, filtered off, and dried in vacuum. Alternatively, the liquor is subjected to alcoholic fermentation and subsequently evaporated in a vacuum, or alcohol is added to it and the precipitated material is removed and dried, or it is heated with phenol, followed by the addition of hydrochloric acid and evaporation to dryness.—A.P.-C.

Process for Making Tanning Material from Sulphite Waste Liquor. T. Blackadder assignor to Robeson Process Co. U. S. pat. 1,571,873, Feb. 2, 1926.—In preparing a tanning material from sulphite waste liquor, digester liquor is treated with slightly more lime than required to neutralize it, the precipitate formed is separated, the liquor concentrated, and sulphur acid added to precipitate the lime.—A.P.-C.

TECHNICAL SECTION, PAGE 214

Section of the

COST ASSOCIATION OF THE PAPER INDUSTRY

Affiliated with

THE AMERICAN PAPER AND PULP ASSOCIATION

Conducted by THOS. J. BURKE, C.A., Sec-Treas

New Regulation Under Act of 1926

(Known as Regulation 69) *

STOCK SOLD BETWEEN DIVIDEND DATES—Article 31 of the new Regulations provides that in the case of stock sold between dividend dates, the entire amount of the dividend is income to the vendee and must be reported in his gross income, when the dividend is payable. The amount advanced by the vendee to the vendor in contemplation of the next dividend payment is an investment of capital. The addition of this provision is not made as a result of a change in the law.

Bad Debts

APPLICATION TO CHANGE METHOD OF TREATING BAD DEBTS—Article 151 of the new Regulations provides that application for permission to change the method of treating bad debts shall be made at least 30 days prior to the close of the taxable year for which the change is to be effective.

RESERVE FOR BAD DEBTS—Under the new Regulations a change to the reserve method of treating bad debts is made less advantageous in some cases, by the omission of a provision contained in the prior Regulations to the effect that where a reserve account is maintained, debts ascertained during the taxable year to be worthless in whole or in part if such debts were outstanding at December 31, 1920, or (if the taxpayer properly changed to the reserve method) prior to the taxable year in which the change of method takes place should be charged against the reserve and may be deducted from income. This provision was probably made as a result of a decision of the Board of Tax Appeals in the "Appeal of Transatlantic Clock & Watch Co., Dec. 1336 (C. C. H.), in which the Board held that a taxpayer changing from the basis of claiming as a deduction from gross income debts which actually accertained to be worthless to a deduction of a reasonable addition to a reserve for bad debts may not deduct both the debts ascertained to be worthless during the year and a reserve set up for bad debts at the close of the year.

Depreciation Allowance

MODIFICATION OF METHOD—If it develops that the useful life of the property will be longer or shorter than the useful life as originally estimated under all the known facts, under the new Regulations the portion of the cost or other basis of the property not already provided for through depreciation allowance should be spread over the remaining useful life of the property as re-estimated in the light of the subsequent facts, and depreciation deductions taken accordingly. Regulations 65, under the act of 1924, contained no similar provision. A somewhat similar provision was contained in Article 166 in Regulation 62 under the Act of 1921. The application of the provision in the new regulations is clearly limited to those cases where the depreciation is estimated and charged off according to the best available evidence at the time, but where the progress of time indicates that such estimate was not correct. For example, if machinery were originally estimated to have a probable life of 10 years, if depreciation were charged at 10 per cent over a 7 year period, if under all the circumstances existing at that time it could not be said that this rate was too low, then the method prescribed in the new Regulations would apply, and if it appears, after 70 per cent of the cost has been charged off, that the remaining value will disappear in two years, it would appear permissible to deduct 15 per cent in each of the remaining two years, and not necessary to reopen the books for all the prior years nor to claim adjustment of taxes for those years. This differs from an application of Article 166 of Regulations 62 which might possibly have been made if the provisions of that article were interpreted literally, for that article appeared to hold that a taxpayer might at any time begin to claim a deduction for depreciation not previously charged off, no matter when accrued. For example, the taxpayer may have charged off depreciation at the rate of 2 per cent upon machinery ordinarily wearing out in 10 years, thereby incorrectly estimating the life of such machinery as 50 years. After charging off 16 per cent of the cost under this method, if it appeared that the life of the machinery would not exceed two additional years, apparently the taxpayer was authorized by Article 166 of Regulation 62 to take a deduction of 42 per cent in each of such years. Actually, however, the Treasury Department did not follow such a literal interpretation of Article 166, Regulation 62, but followed the rule which is now incorporated in the new Regulations.

EXTENSION OF TIME FOR FILING RETURNS—In accordance with a new provision in the Act of 1926 under which the Commissioner may grant a reasonable extension of time for filing returns "under such rules and regulations as he shall prescribe with the approval of the Secretary," the Commissioner has delegated to the various collectors authority for granting extensions of time for filing income tax returns. Application for extension of time for filing returns should be addressed to the collector for the district in which the taxpayer files his return. The Commissioner is also authorized to grant a general extension of time for filing returns, and the new Regulations grant an extension of time up to the 15th day of the sixth month following the close of the taxable year for filing returns of income for 1925 and subsequent years and for paying the tax, in the case of foreign partnerships and foreign corporations, domestic corporations which contract their business and keep their records and books of account abroad, domestic corporations whose principal income is from sources within the possessions of the United States, and American citizens residing or traveling abroad. In all such cases an affidavit must be attached to the return stating the cause of the delay in filing. Taxpayers who take advantage of the extension of time for paying the tax will be charged with

* Commerce Clearing House Bulletin.

interest at the rate of 6 per cent from the original due date until paid.

Payment of Tax in Installments

INSTALLMENTS TO BE EQUAL IN AMOUNT—In the past there has been considerable question as to what constitutes a payment of tax installments. The new Regulations provide that where the taxpayer elects to pay the tax in four installments, each of the installments must be equal in amount. However, any installment may be paid at the election of the taxpayer, prior to the date prescribed for its payment. This provision, with respect to the installments being equal in amount, does not apply to corporation income taxes for the year 1925.

Deficiency in Tax

INCLUDES ADDITIONAL DISCLOSED BY AMENDED RETURN—The additional tax shown on an amended return is a deficiency within the meaning of the statute, so the new Regulations provide. This is in accord with Mim. 3428, May 24, 1926.

NEW PROCEDURE—For a detail explanation of the new procedure under the Act of 1926, with respect to deficiencies in tax, the procedure before the Board of Tax Appeals, and the right to have the Board's decision reviewed by the courts.

EXTENSION OF TIME FOR PAYMENT—The payment of a deficiency prior to the expiration of an extension of time for such payment does not relieve the taxpayer from paying the entire amount of interest provided for in the extension. This is in accord with I. T. 2173, IV-1 C. B. 68, issued in regard to the Act of 1924.

JEOPARDY ASSESSMENT—In connection with the provisions of the Act of 1926 with respect to the filing of a bond to stay the collection of the tax where a jeopardy assessment has been made, which differ somewhat from the prior statutes, there has been some question as to the effect of the filing of a bond after the expiration of ten days from the date of notice and demand. The new regulations provide that any bond filed after the expiration of ten days from the date of the jeopardy notice and demand is not such a bond as is contemplated by Section 279 (f) and while the collector may in his discretion accept the bond and stay collection of the deficiency, the taxpayer will not be relieved from payment of interest on the amount of the deficiency at the rate of 1 per cent a month on the date of notice and demand to the date of payment. Consequently, according to the Department's view, the failure to file a bond within the ten-day period will make the taxpayer subject to interest at 1 per cent a month instead of ½ per cent a month.

ASSESSMENT OF DEFICIENCY—The new statute contains a provision enabling the taxpayer to enjoin the assessment of a tax if the Commissioner attempts to take such action before allowing the taxpayer to appeal to the Board of Tax Appeals. However, there are certain exceptions in the new Regulations which should not be overlooked by the taxpayer. Though the taxpayer has not been given the right to appeal to the Board of Tax Appeals, an assessment of the deficiency may be made: (1) where the taxpayer is notified of an additional tax due on account of a mathematical error upon the face of the return; (2) where the assessment will be jeopardized by delay and the Commissioner makes a jeopardy assessment; (3) upon the adjudication of bankruptcy in a bankruptcy proceeding or the appointment of a receiver; (4) where the taxpayer petitions for a review of the Board of Tax Appeal's decision and files no bond; and (5) where the taxpayer files with the Commissioner a consent to an assessment.

Claims for Credit

REGULATIONS RELATING THERETO OMITTED—The inconsistency between the rule in regard to filing claims for credit as contained in the prior Regulations and the instructions with respect to such claims as contained in Mim. 3279, February 6, 1925, IV-IC.B. 75, has apparently been remedied in the new Regulations by the omission of the provisions relating to the filing of claims for credit. In accordance with Mim. 3279, taxpayers were not permitted to stay the collection of income taxes assessed after June 2, 1924, by the filing of a claim for credit, and apparently the same procedure will be followed under the new Act. Over-assessments and over-payments of income and profits taxes will be adjusted by means of over-assessments. Credits or refunds of over-payments on the basis of such certificates of over-assessment may not be made or allowed, however, after the expiration of the statutory period of limitations, unless prior to the expiration of such period a claim was filed on Form 843.

Interest on Credits

DIFFICULT QUESTION NOT EXPLAINED IN REGULATIONS—Many taxpayers have been awaiting to see what the new Regulations provide in regard to the change made by the Act of 1926 with respect to the allowance of interest on credits. Where settlement has been made by the Department in accordance with its interpretation of Section 1116 of the Act of 1926, there has been considerable controversy as to whether the Department's interpretation is correct. The statute provides that in the case of a credit, interest runs to the "due date of the amount against which the credit is taken, but if the amount against which the credit is taken is an additional assessment made under the Revenue Act of 1921, the Revenue Act of 1924, or this Act, then to the date of assessment of that amount." It is contended by some taxpayers that the words used in this Section do not accomplish the purpose intended by Congress and that an assessment is "made" under the Act of 1921, if made while that Act was in effect, even though the additional assessment is for a year prior to the passage of the Act of 1921. The same is contended to be true with respect to whether an assessment is made under the Act of 1924 or the Act of 1926. As is shown by the Senate Report of the Act of 1926, Congress intended that interest in the case of a credit should run to the date of the additional assessment of the amount against which the credit is taken only where the credit is taken against an additional assessment of taxes imposed by the Acts of 1921, 1924 or 1926. If Congress has not used words to accomplish this purpose, then taxpayers will be allowed interest in some cases on the amount of a credit applied against an additional assessment which bears no interest. It was this situation which Congress intended to correct. The question is, whether the situation is corrected by the words used by Congress. The new Regulations contain no provision explaining the Department's attitude with respect to this point.

Certified Copies of Income Tax Returns

MAY BE USED AS EVIDENCE BEFORE BOARD OR COURTS—In view of the necessity at times of introducing the return of the taxpayer in evidence before the Board of Tax Appeals or the federal courts, taxpayers should note the new provision in the Regulations that certified copies of returns will be furnished to the persons entitled thereto only upon written request for same sent to the Commissioner at Washington. This is of particular interest in view of the provision in Section 882 of the Revised Statutes, by reason of which a certified copy of the return may be admitted in evidence before the Board of Tax Appeals or the courts. Where the taxpayer wishes to introduce the return in evidence, he should secure a certified copy of such return. It is also stated that the Commissioner may prescribe a reasonable fee for furnishing copies of returns. A shareholder who is entitled to inspect the return of the corporation may secure a copy of the corporation income tax return.

Seven Day Week Still Observed at Some Mills

[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., November 26, 1926.—Eagle Lodge of Papermakers is still dissatisfied with local working conditions, asserting that the seven day week is still in force in some paper mills. The grievance committee is at work on the matter. Most of the paper mills have obeyed the state law but the lodge says that some of them have slipped back into the old seven-day week regime contrary to state law.

LOST SECTION

Aligning Sales Prices With Costs*

By John G. Aldrich, President & General Manager, New England Butt Co.

When an order is filled by the New England Butt Company and the sales, manufacturing, shipping and cost records are complete, the work connected with the order is not yet finished. The method of handling incoming orders and the preparing, routing and final filing of all copies of such orders was described in a previous article. But there remains one very important process, for which the management holds itself responsible. This operation is the checking up of the relation between selling price and actual cost of every order shipped, to discover the cause of any fluctuation from previous average manufacturing cost and to determine whether any change should be made in future selling price.

The work of checking up is done at the close of each month's business. Orders are classed in two groups—those for complete new machines and those for repair parts. These two classes of orders are numbered in separate series and are filed separately both during and after the course of manufacturing. The cost check-up on each group is done separately.

Each group of orders is listed on sheets at the end of the month. The data recorded are: Order number, description of machine or part, quantity ordered, selling price, cost price, and profit. As the sheets are of no permanent value, no special care other than maintaining accuracy is required in their preparation. Each item is then carefully inspected to see if a correct and reasonable ratio exists between cost and selling price. Obviously, there are two extremes to be avoided in manufacturing—not to fix selling prices so low that no real working margin exists from which to pay dividends and build up a reserve to carry the business along, and not to sell products at prices so far above cost as to remove the stimulus to business which comes from fair prices.

Where the relationship between costs and selling prices is normal no further action is taken. In such cases the indication is that predetermined manufacturing expenses have been correctly measured and that plant operation is proceeding according to the plans of the management. Where, however, the cost is either too high or too low, relative to the selling price, an investigation is at once made to determine the cause.

Cost Far Below Selling Price

If the cost is far below the selling price, the latter having been set to produce a reasonable profit over previous average costs, some unusually favorable conditions have attended manufacturing processes, some better production methods or some very favorable material costs have entered in, or some error has been made in not reporting one or more of the items or in extending the cost calculations. Whatever the cause, when the source of the discrepancy is traced down, the work is fresh in the minds of those who have done it, and the cause can readily be found.

In those cases where a better method of doing work has been found, or an ability to make favorable purchases has been discovered, it is obviously to the company's advantage to adopt the new practices and insure a continuance of lower manufacturing costs. When these have once been assured a reduction in selling price can be made and a sales advantage thereby realized. If errors in reporting costs or extending them have occurred employees can be instructed how to avoid repetitions of these mistakes. Where some merely temporary condition has lowered the cost in the individual case, of course no further action is necessary. But under all circumstances the management has found out exactly what caused the variation and can govern its future course in the certainty of this knowledge.

When the costs on any orders have been higher than previous averages and approach close to or even exceed the selling prices, as might happen on rare occasions, an investigation is necessary to find out whether mistakes or temporary conditions have been the cause, or whether an increase in manufacturing expense is likely to be permanent. A consistently narrow margin on any line of products calls for prompt attention to avoid further trouble. Aside from some special servicing feature to customers, which might call for selling prices of a lower average ratio than those on most of the lines of product, it is usually poor policy to bring selling prices too dangerously near the point where they may wipe out profits or cause actual losses.

After the cost and selling price ratios have been checked, and arrangements have been made to adjust any lack of balance arising out of permanently altered conditions, charts are prepared showing cost, profit and trade trends.

Figure 1 is a sample of a chart prepared to give the management an accurate picture of the trend of total sales, parts sales, machine sales, and part order costs. These data are charted on ratio ruling. With the aid of the comparison scale, shown at the right in the figure and prepared on a separate cardboard strip so that it can be placed anywhere on the diagram, the comparative increase or decrease in each curve from month to month can be measured. This scale is set with its zero opposite the reading of any curve for any month (as part order costs for June in Fig. 1). The per cent increase or decrease of the next, or any other month is read by horizontally projecting to the scale the point for the desired month on this same curve (as part order costs for July in Fig. 1).

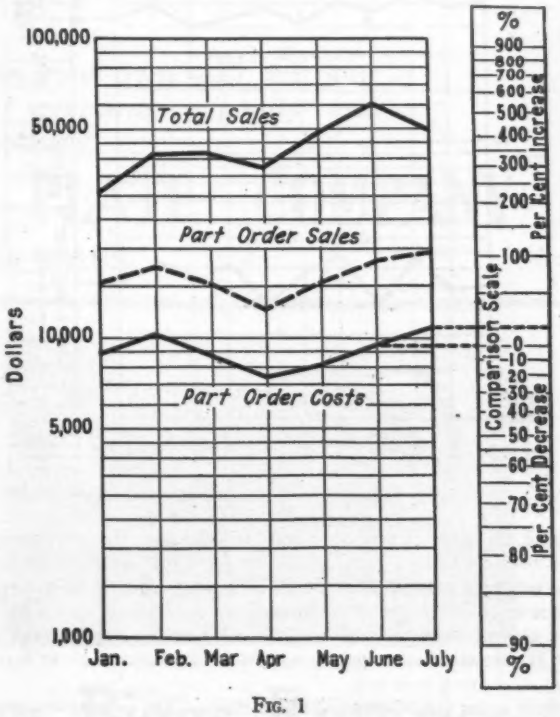

FIG. 1

Summary of Sales and Part Order Costs

Chart of Machine Orders

Fig. 2 is a chart used for sales of complete machines. One such chart is made up for each size and kind of machine and the charts are filed in a loose-leaf binder according to machine symbols.

* Manufacturing Industries.

Consecutive lots in which machines are ordered and the corresponding number furnished on each lot are recorded along the base of the chart. The data plotted graphically above are unit costs. Naturally the cost of the unit machine made in a small lot tends to be higher than that of one made in a large lot. The use of the unit or average cost per machine in each lot when plotting the chart provides a direct means of comparison as to cost tendencies.

The lowest curve on the figure is that of labor cost per machine. The second curve is material cost per machine and the third curve represents total unit cost. Ratio ruling furnishes the facility for bringing the large amounts down within the scope of a normal size sheet.

By the use of the component parts scale, shown to the right in

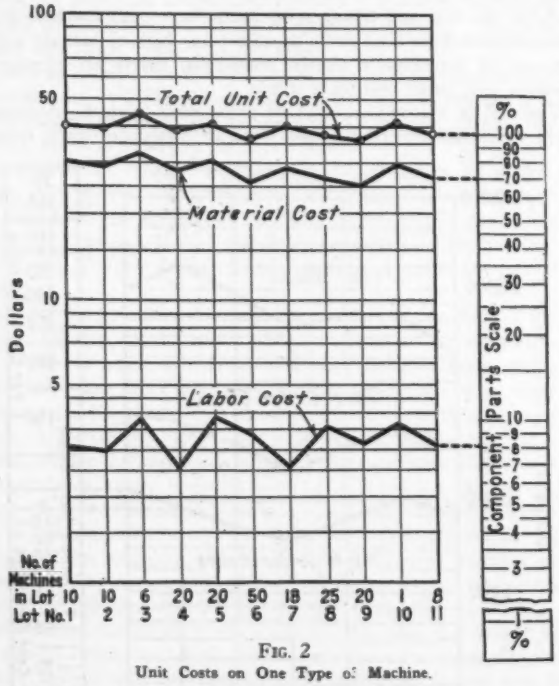

FIG. 2
Unit Costs on One Type of Machine.

Fig. 2, the ratio of these unit costs to each other for any one lot can be ascertained. Thus, if the 100 per cent line is set opposite the total unit cost point of lot 11, then material cost for one machine in lot 11, projected horizontally to the scale, is shown as 70 per cent of the total unit cost. Labor cost for one machine in lot 11, likewise horizontally projected to the scale, is about 8 per cent of the total unit cost.

Both scales can be applied to both charts. The comparison scale measures percentages of increase or decrease from month to month of any curve, and must always be set with its zero opposite the point from which this value is to be measured. The component parts scale measures the ratio of a point on any curve to a point on a second curve for the same month, or the same lot, and must always be set with its 100 per cent mark opposite the curve chosen as the base from which to measure.

Sales prices which do not line up well with costs are dangerous. The only safe practice is to have all prices correct at all times, keeping them so by constant inspection and check up such as is provided by the methods and charts above described.

New Link-Belt Office for New Haven

CHICAGO, Ill., November 15, 1926.—To maintain closer contact with their friends in the New Haven territory, and to serve their increased amount of business in that district, the Link-Belt Company, of 910 South Michigan avenue, Chicago, it has been just announced, has established temporary headquarters in Connecticut's largest city, at 152 Temple street. R. H. Hagner, formerly of the Philadelphia office, will be Link-Belt's representative in this, their thirty-sixth branch, which will be devoted specially to the sale of Link-Belt silent chains and Link-Belt roller chains.

F. B. Cummings Accepts State Appointment

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., November 29, 1926.—Frank B. Cummings, a retired paper merchant, has accepted the appointment by Governor Fuller as director of the division of animal industry of the state department of conservation, from which office Dr. Lester H. Howard resigned some weeks ago. Mr. Cummings was appointed on account of conditions arising from alleged "cattle frauds" investigated by the state government and also by the Hampden and Worcester counties grand juries. Mr. Cummings' name was submitted at a special meeting of the executive council and the nomination confirmed under suspension of the rules before Governor Fuller sailed for Europe. He was for seven years head of the Storrs and Bement Company, this city, retiring from that position last April. Mr. Cummings was at one time with the Whittaker Paper Company in Pittsburgh, Pa., and manager for that concern's Boston office. The choice was highly endorsed by Horace A. Moses, of Springfield, Mass., and the town of Russell, Mass., head of the Strathmore Paper Company. Mr. Moses has been closely associated with Mr. Cummings and others interested in the future of the cattle industry of the commonwealth. Mr. Cummings, who is a native of Southbridge, Mass., has accepted the appointment. His home is at Newton, Mass.

I. S. Dillingham, a paper broker, and for many years in the trade, died recently. Mr. Dillingham had the respect and esteem of all members of the trade. His office was in the Arch Building on Federal street.

W. H. Lloyd, sales manager for Dill and Collins Company, Philadelphia, Pa., was in town during the last week on business.

John Carter & Co., Inc., have added to their list of bond paper a new line, the Milford Bond.

British Paper Trade Fairly Good

LONDON, England, November 15, 1926.—Taking into consideration the present abnormal conditions due to the stoppage of coal production, business in the paper industry on the whole may be regarded as fairly good. The demand is well maintained and mills making esparto papers are particularly well employed. According to the Board of Trade Returns, the amount of paper exported from the United Kingdom for the first nine months of this year totalled 3,129,592 cwts., compared with 3,207,904 cwts. for the same period of 1925. The decrease is due mainly to a diminution in the amount of printing paper exported to Australia, which in 1925 (9 months) amounted to 1,809,004 cwts., as compared with 1,639,429 cwts., the quantity exported during the first nine months of this year. An increase of 36,746 cwts. is, however, shown in the exports of printing paper to "other countries."

Casein Appeal Decided

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 23, 1926.—The United States Court of Customs Appeals has handed down its opinion in docket No. 2735 of the Fenton Company et al., against the United States. In the decision which was rendered by Associate Judge Bland it is stated that the importers claimed drawback on certain casein, not of the quality ordered, which was exported on the same vessel in which it had arrived, the issue being whether the merchandise passed out of the custody of the government before being entered and laden on the export vessel. The Customs Court overruled the claim of the importers and their judgment was reversed by the Court of Appeals in its decision.

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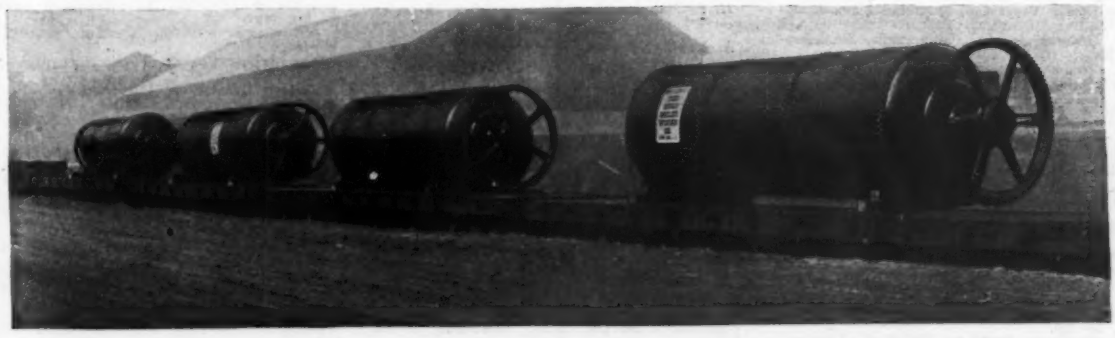

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PAPER MILLS send orders to Biggs as a matter of course.
That confidence in us doesn't come from advertising, neither is it because of cut prices to get the business. It's the result of years in giving the paper industry the best possible equipment and quick delivery at a fair price.

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ROTARY BLEACHING BOILERS

for Years of Dependable Cooking and Bleaching

Imports of Paper and Paper Stock

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING NOVEMBER 27, 1926

SUMMARY

Cigarette paper .....442 cs.
Wall paper .....34 rolls, 58 bls., 29 cs.
Paper hangings .....2 cs., 138 bls., 39 rolls
News print .....957 rolls
Printing paper .....621 cs.
Packing paper .....23 rolls
Pergamyn paper .....39 cs.
Cover paper .....2 cs.
Decalcomania paper .....40 cs.
Transfer paper .....5 cs.
Photo paper .....4 cs.
Baryta coated paper .....79 cs.
Transferatype paper .....2 cs.
Filter paper .....16 cs.
Writing paper .....56 cs.
Parchment paper .....5 cs.
Tissue paper .....1 cs.
Colored paper .....3 cs.
Paper tubes .....19 cs.
Straw board .....231 rolls
Miscellaneous paper .....562 cs.

CIGARETTE PAPER

Liggett & Myers Tobacco Co., Rochambeau, Havre, 127 cs.
R. J. Reynolds Tobacco Co., Sarcoxie, Havre, 100 cs.
Standard Products Corp., Sarcoxie, Havre, 120 cs.
Standard Products Corp., Mauretania, Southampton, 10 cs.
Standard Products Corp., Homeric, Southampton, 13 cs.
Standard Products Corp., De Grasse, Havre, 40 cs.
P. J. Schweitzer, De Grasse, Havre, 32 cs.

WALL PAPER

Keller-Dorian Paper Co., Berengaria, Southampton, 5 cs.
Keller-Dorian Paper Co., Mauretania, Southampton, 12 cs.
A. C. Dodman, Jr., Inc., Mauretania, Southampton, 3 bls.
A. C. Dodman, Jr., Inc., Homeric, Southampton, 16 bls., 9 cs.
F. J. Emmerich, American Merchant, London, 7 bls.
F. J. Emmerich, Adriatic, Liverpool, 7 bls.
F. J. Emmerich, Westphalia, Hamburg, 25 bls., 3 cs.
H. Reeve Angel & Co., Inc., G. Washington, Bremen, 34 rolls.

PAPER HANGINGS

Whiting & Patterson Co., London Mariner, London, 11 bls.
Whiting & Patterson Co., Homeric, Southampton, 2 cs.
A. C. Dodman, Jr., Inc., Samaria, Liverpool, 101 bls.
W. H. S. Lloyd & Co., American Merchant, London, 26 bls.
H. C. Hackney, American Merchant, London, 39 rolls.

NEWS PRINT

H. Reeve Angel & Co., Inc., G. Washington, Bremen, 333 rolls.
Parsons & Whittemore, Inc., Berlin, Bremen, 436 rolls.
Box Board Lining Co., Berlin, Bremen, 95 rolls.
Perkins, Goodwin & Co., Westphalia, Hamburg, 93 rolls.

PRINTING PAPER

Maurice O'Meara Co., G. Washington, Bremen, 116 cs.
H. Reeve Angel & Co., Inc., G. Washington, Bremen, 149 cs.
Maurice O'Meara Co., Berlin, Bremen, 346 cs.
J. Henschell & Co., Westphalia, Hamburg, 4 cs.
R. F. Downing & Co., Inc., Westphalia, Hamburg, 6 cs.

PACKING PAPER

Standard Underground Cable Co., Berlin, Bremen, 23 rolls.

PERGAMYN PAPER

F. C. Strype, Westphalia, Hamburg, 39 cs.

COVER PAPER

International Forwarding Co., Westphalia, Hamburg, 2 cs.

DECALCOMANIA PAPER

B. F. Drakenfeld & Co., Adriatic, Liverpool, 24 cs.
C. W. Sellers, G. Washington, Bremen, 10 cs.
C. W. Sellers, Westphalia, Hamburg, 6 cs.

TRANSFER PAPER

Hensel, Bruckman & Lorbacher, Noordam, Rotterdam, 5 cs.

PHOTO PAPER

J. J. Gavin & Co., Adriatic, Liverpool, 4 cs.

BARYTA COATED PAPER

Globe Shipping Co., G. Washington, Bremen, 79 cs.

TRANSFERATYPE PAPER

Eastman Kodak Co., Mauretania, Southampton, 2 cs.

FILTER PAPER

H. Reeve Angel & Co., Inc., American Merchant, London, 6 cs.
O. A. Brown & Co., De Grasse, Havre, 10 cs.

WRITING PAPER

Coenca, Morrison & Co., Berengaria, Southampton, 3 cs.
Japan Paper Co., Rochambeau, Havre, 6 cs.
L. Bamberger & Co., Sarcoxie, Havre, 1 cs.
American Express Co., Sarcoxie, Havre, 2 cs.
Abraham & Strauss, Westphalia, Hamburg, 4 cs.
The Eleto Co., Mauretania, Southampton, 3 cs.
Guibout freres, Mauretania, Southampton, 1 cs.
A. C. Dodman, Jr., Inc., Mauretania, Southampton, 1 cs.
Schenckers, Inc., De Grasse, Havre, 2 cs.
Japan Paper Co., De Grasse, Havre, 1 cs.
Marshall Field & Co., De Grasse, Havre, 32 cs.

PARCHMENT PAPER

Globe Shipping Co., Noordam, Rotterdam, 5 cs.

TISSUE PAPER

F. C. Strype, Samaria, Liverpool, 1 cs.

COLORED PAPER

P. H. Petry & Co., Westphalia, Hamburg, 3 cs.

PAPER TUBES

H. de Maguinn, Rochambeau, Havre, 19 cs.

STRAW BOARD

A. Vuyk, Noordam, Rotterdam, 231 rolls.

MISCELLANEOUS PAPER

Kadri Bros., Rochambeau, Havre, 19 cs.
C. Grimmer & Son, Rochambeau, Havre, 2 cs.
Globe Shipping Co., Berlin, Bremen, 2 cs.
Japan Paper Co., Duisio, Genoa, 59 cs.
S. Gilbert, Noordam, Rotterdam, 20 cs.
E. Dietzgen & Co., H. Olav, Copenhagen, 141 cs.
W. Hartman & Co., Inc., Westphalia, Hamburg, 136 cs.
Canson & Montgolfier, De Grasse, Havre, 61 cs.
J. Kennedy, De Grasse, Havre, 10 cs.
Hensel, Bruckman & Lorbacher, De Grasse, Havre, 112 cs.

RAGS, BAGGINGS, ETC.

E. Butterworth & Co., Inc., Idaho, Hull, 192 bls. rags.
Equitable Trust Co., Idaho, Newcastle, 30 bls. rags.
Brown Bros. & Co., Idaho, Newcastle, 144 bls. rags.
N. Y. Trust Co., Idaho, Newcastle, 119 bls. rags.
B. D. Kaplan, Idaho, Antwerp, 101 bls. rags.
Royal Manfg. Co., Idaho, Antwerp, 109 bls. cotton waste.
Gallagher & Ascher, Sarcoxie, Havre, 47 bls. rags.
E. Mayer, Sarcoxie, Havre, 35 bls. rags.
E. J. Keller Co., Inc., Sarcoxie, Havre, 45 bls. rags.
A. W. Fenton, Inc., Sarcoxie, Havre, 95 bls. rags.
Castle & Overton, Inc., Sarcoxie, Havre, 58 bls. bagging.
S. Silberman & Co., Sarcoxie, Havre, 57 bls. rags.
Atterbury Bros., Inc., Sarcoxie, Havre, 36 bls. rags.
Castle & Overton, Inc., Sarcoxie, Dunkirk, 26 bls. rags.
Maurice O'Meara Co., Aviemore, Dundee, 27 bls. rags.
D. M. Hicks, Inc., Aviemore, Dundee, 19 bls. rags.
Castle & Overton, Inc., Aviemore, Scotland, 165 bls. thread waste.
E. J. Keller Co., Inc., Clontarf, Genoa, 96 bls. bagging.
E. J. Keller Co., Inc., Anaconda, Rotterdam, 264 bls. rags.
Mutnick Bros., Adriatic, Liverpool, 34 bls. rags.
P. Berlowitz, G. Washington, Bremen, 206 bls. rags.
Darmstadt, Scott & Courtney, Conehatta, Manchester, 24 bls. new cuttings.
I. Cohen Son & Co., Conehatta, Manchester, 12 bls. paper stock.
Brown & Roese, Conehatta, Manchester, 37 bls. bagging.
M. Snedeker Corp., Conehatta, Belfast, 68 bls. rags.
Castle & Overton, Inc., Mercier, Antwerp, 24 bls. waste.
E. J. Keller Co., Inc., Mercier, Antwerp, 90 bls. rags.
D. M. Hicks, Inc., May. Maru, Kobe, 70 bls. rags.
Castle & Overton, Inc., London Mariner, London, 109 bls. rags.
E. J. Keller Co., Inc., Pres. Roosevelt, Bremen, 43 bls. rags.
E. J. Keller Co., Inc., Hektor, Barcelona, 160 bls. bagging.
Bulkley, Dunton & Co., Bremen, ——, 47 bls. rags.
I. Heuerfeld, De Grasse, Havre, 23 bls. rags.
E. J. Keller Co., Inc., Marigot, Dunkirk, 93 bls. rags.
S. Silberman & Co., Marigot, Dunkirk, 100 bls. rags.
D. M. Hicks, Inc., Marigot, Havre, 36 bls. rags.
Myers Lipman Woolstock Corp., Marigot, Havre, 29 bls. rags.
Central National Bank, Marigot, Havre, 100 bls. rags.
National City Bank, Marigot, Havre, 50 bls. rags.
E. J. Keller Co., Inc., Marigot, Havre, 42 bls. rags.
Equitable Trust Co., Marigot, Havre, 91 bls. rags.
E. J. Keller Co., Inc., Noordam, Amsterdam, 34 bls. rags.
S. Silberman & Co., Noordam, Rotterdam, 8 bls. rags.
Chemical National Bank, Noordam, Rotterdam, 77 bls. rags.
Castle & Overton, Inc., Noordam, Rotterdam, 67 bls. rags.
S. Ruebens & Bros., Noordam, Rotterdam, 34 bls. rags.
The Barrett Co., Noordam, Rotterdam, 94 bls. rags.
Bulkley, Dunton & Co., Noordam, ——, 205 bls. bagging.
Irving Bank-Columbia Trust Co., Liberty Land, Algiers, 186 bls. rags.
Darmstadt, Scott & Courtney, Westphalia, Hamburg, 74 bls. rags.
A. W. Fenton, Inc., Westphalia, Hamburg, 39 bls. rags.
W. Schall & Co., American Merchant, London, 216 bls. rags.

OLD ROPE

Brown Bros. & Co., Idaho, Hull, 154 coils.
Bulkley, Dunton & Co., Noordam, ——, 27 bales.

MANILA LATH YARN

Manufacturers Trust Co., Pr. Garfield, Manila, 310 rolls.

MANILA ROPE

W. Schall & Co., Hektor, Barcelona, 118 bales
Ellermans' Wilson Line, American Merchant London, 63 coils.
Ellermans' Wilson Line, Homeric, Southampton, 59 coils.

HEMP ROPE

N. Y. Cordage Co., Samaria, Liverpool, 85 pkgs.
S. R. Burrows, Homeric, Southampton, 13 bales.
N. Y. & Porto Rico S. S. Co., Adriatic, Liverpool, 54 coils.
Wessel, Duval & Co., Idaho, Newcastle, 199 pkgs.
Munson S. S. Line, Idaho, Newcastle, 11 pkgs.

WOOD PULP

A. P. W. Paper Co., Hertha, Sheet Harbor, 12,574 bls. wood pulp, 1,082 tons.
Johanson, Wales & Sparre, Inc., Sagoporack, Hernosand, 1,650 bls. sulphite, 275 tons.
Castle & Overton, Inc., Berlin, Bremen, 200 bls. wood pulp.
W. von Doorn, Noordam, Rotterdam, 171 bls. wood pulp.
M. Gottesman & Co., Inc., Noordam, Rotterdam, 660 bls. wood pulp.
National City Bank, Hellig Olav, Oslo, 300 bls. sulphite.
National City Bank, Hellig Olav, Copenhagen, 500 bls. wood pulp.

(Continued on page 56)

GATOR HIDE KRAFT WRAPPING PAPER

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With the increasing demand for southern kraft papers more and more consumers are insisting upon the appearance of the Gator Hide Label.

The Gator Hide Brand is accepted as a guarantee of the highest quality and uniformity in southern kraft paper. Under laboratory tests it reaches a very high standard for bursting, tearing, and uniformity of texture.

Gator Hide Brand kraft has remarkable resistance to dampness. Because of this, and its leathery toughness, its smooth finish, its attractive soft light brown color it is being employed for a great variety of commercial purposes.

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Imports of Paper and Paper Stock

(*Continued from Page 54*)

Tidewater Papermills Co., Aslaug, Seven Islands, 6,219 bls. wood pulp.
Equitable Trust Co., Westphalia, Hamburg, 253 bls. wood pulp, 51 tons.
Buck, Kiaer & Co., Inc., Westphalia, Halmstad, 600 bls. wood pulp, 120 tons.
Buck, Kiaer & Co., Inc., Stavangerfjord, Trondhjem, 3,600 bls. chemical pulp.
Chemical National Bank, Stavangerfjord, Oslo, 900 bls. sulphite.
Buck, Kiaer & Co., Inc., Stavangerfjord, Oslo, 800 bls. kraft pulp.
Buck, Kiaer & Co., Inc., Stavangerfjord, Oslo, 1,000 bls. sulphite.
E. M. Sergeant & Co., Stavangerfjord, Oslo, 330 bls. chemical pulp.
Atterbury Bros., Inc., Stavangerfjord, Oslo, 2,500 bls. wood pulp.
Bulkley, Dunton & Co., San Francisco Maru, ——, 100 bls. wood pulp.
Bulkley, Dunton & Co., Milos, ——, 6,675 bls. wood pulp.
Buck, Kiaer & Co., Inc., Tyrifjord, Greaker, 2,575 bls. sulphite.
Buck, Kiaer & Co., Inc., Stuttgart, Trondhjem, 800 bls. sulphite.
Buck, Kiaer & Co., Inc., Stuttgart, Halmstad, 400 bls. sulphite.
H. Hollesen, Inc., Pres. Roosevelt, Bremen, 1,139 bls. wood pulp, 238 tons.

WOOD PULP WADDING

Birn & Wachenheim, Noordam, Rotterdam, 60 bls.

WOOD FLOUR

Corn Exchange Bank, Anaconda, Rotterdam, 500 bls., 25,375 kilos.
E. M. Sergeant & Co., Hellig Olav, Copenhagen, 203 bags.
B. L. Soberski, Stavangerfjord, Frederikstad, 3,000 bags.

CASEIN

T. M. Duche & Sons, West Calumb, Buenos Aires, 2,502 bags, 150,120 kilos.
Kalbfleisch Corp., Pan America, Buenos Aires, 1,251 bags.
Guaranty Trust Co., Pan America, Buenos Aires, 84 bags.

BOSTON IMPORTS

WEEK ENDING NOVEMBER 27, 1926

Johanson, Wales & Sparre, Inc., Sagoporack, Hernosand, 2,400 bls. sulphate, 400 tons.
Pagel, Horton & Co., Inc., Sagoporack, Domsjo, 4,698 bls. sulphite, 783 tons.
T. M. Duche & Sons, West Calumb, B. Aires, 717 bags casein, 43,020 kiols.
Kalbfleisch Corp., West Calumb, B. Aires, 334 717 bags casein, 43,020 kilos.
1st National Bank of Boston, West Calumb, B. Aires, 500 bags casein, 30,000 kilos.
M. H. Grace & Co., West Calumb, B. Aires, 423 bags casein, 25,380 kilos.
Guaranty Trust Co., West Calumb, B. Aires. 250 bags casein, 35,060 lbs.
Kalbfleisch Corp., Castilian Prince, B. Aires, 2,834 bags casein, 374,870 lbs.
Bulkley, Dunton & Co., Boschdyk, ——, 90 bls. rags.
Bulkley, Dunton & Co., Etna Maru, ——, 581 bls. rags.
Bulkley, Dunton & Co., Burgerdyk, ——, 61 bls. rags.
Bulkley, Dunton & Co., Burgerdyk, ——, 136 bls. wood pulp.
Bulkley, Dunton & Co., Eda, ——, 3,250 bls. wood pulp.
Bulkley, Dunton & Co., Gustavsholm, ——, 2,250 bls. wood pulp.
E. J. Keller Co., Inc., Boschdyk, Rotterdam, 14 bls. rags.
E. J. Keller Co., Inc., Pipestone County, Havre, 389 bls. rags.
E. J. Keller Co., Inc., Pipestone County, Dunkirk, 44 bls. rags.
Castle & Overton, Inc., Western Ally, Holland, 246 bls. wood pulp.

PHILADELPHIA IMPORTS

WEEK ENDING NOVEMBER 27, 1926

2nd National Bank of Boston, London Mariner, London, 304 bls. rags.
Brown Bros. & Co., London Mariner, London, 133 bls. rope.
Phila. Girard National Bank, London Mariner, London, 183 bls. rags.
Castle & Overton, Inc., Sarcoxie, Havre, 173 bls. rags.
C. A. Devlin, Sarcoxie, Havre, 328 bls. rags.
J. M. Jaffe, Sarcoxie, Havre, 23 bls. rags.
A. Hurst & Co., Sarcoxie, Havre, 66 bls. rags.
Katzenstein & Keene, Inc., Sarcoxie, Havre, 29 bls. rags.
L. H. Abenheimer, Sarcoxie, Havre, 556 bls. rags.
D. I. Murphy, Sarcoxie, Dunkirk, 83 bls. rags.
The Stone Bros. Co., Inc., Sarcoxie, Dunkirk, 140 bls. rags.
E. J. Keller Co., Inc., Sarcoxie, Dunkirk, 146 bls. rags.
Castle & Overton, Inc., Sarcoxie, Dunkirk, 44 bls. rags.
Royal Manfg. Co., Sarcoxie, Dunkirk, 30 bls. rags.
E. H. Bailey & Co., Aviemore, Leith, 112 cs. paper.
Brown Bros. & Co., Aviemore, Leith, 74 bls. rags.
J. A. Steer & Co., Aviemore, Leith, 81 coils old rope.
G. M. Graves & Co., Anaconda, Rotterdam, 184 bls. rags.
S. Spector & Co., Anaconda, Rotterdam, 40 bls. rags.
E. J. Keller Co., Inc., Anaconda, Rotterdam, 239 bls. rags.
L. H. Abenheimer, Marigot, Havre, 318 bls. rags.
Phila. Girard National Bank, Marigot, Havre, 35 bls. rags.
Bank of The Manhattan Co., Marigot, Havre, 21 bls. rags.
Bulkley, Dunton & Co., Marigot, ——, 87 bls. rags.
Bulkley, Dunton & Co., Burgerdyk, ——, 60 bls. rags.
Bulkley, Dunton & Co., San Francisco, ——, 81 bls. rags.
Castle & Overton, Inc., Boschdyk, Holland, 46 bls. rags.
Castle & Overton, Inc., Altmark, Germany, 79 bls. rags.
E. J. Keller Co., Inc., Sangamon, Naples, 143 bls. rags.
E. J. Keller Co., Inc., Samgamon, Marseilles 164 bls. rags.
E. J. Keller Co., Inc., Fenchurch, Barcelona 210 bls. rags.
E. J. Keller Co., Inc., Boschdyk, Rotterdam, 111 bls. rags.
E. J. Keller Co., Inc., Sacandaga, Antwerp, 212 bls. rags.

BALTIMORE IMPORTS

WEEK ENDING NOVEMBER 27, 1926

T. W. Preston, Conehatta, Belfast, 124 bls. waste paper.
National City Bank, Marigot, Havre, 510 bls. rags.
Baltimore Trust Co., Marigot, Dunkirk, 100 bls. rags.
National City Bank, Marigot, Dunkirk, 744 bls. rags.
E. J. Keller Co., Inc., Burgerdyk, Karlsruhe, 600 bls. wood pulp.
Bulkley, Dunton & Co., Aldrich, ——, 660 bls. wood pulp.
Bulkley, Dunton & Co., Consul Olsson, ——, 2,325 bls. wood pulp.
Bulkley, Dunton & Co., Milos, ——, 3,125 bls. wood pulp.

NEW ORLEANS IMPORTS

WEEK ENDING NOVEMBER 27, 1926

E. J. Keller Co., Inc., Aegina, Bremen, 71 bls. rags.
E. J. Keller Co., Inc., Monfiore, Palermo, 159 bls. rags.
Castle & Overton, Inc., Nishmaha, Germany, 79 bls. rags.

PORTLAND, ME., IMPORTS

WEEK ENDING NOVEMBER 27, 1926

Pagel, Horton & Co., Inc., Sagoporack, Husum, 19,284 bls. sulphate, 3,214 tons.
Bulkley, Dunton & Co., Gustavsholm, ——, 3,000 bls. wood pulp.

NORFOLK IMPORTS

WEEK ENDING NOVEMBER 27, 1926

E. J. Keller Co., Inc., West Arrow, Rotterdam, 70 bls. rags.

SAVANNAH IMPORTS

WEEK ENDING NOVEMBER 27, 1926

Bulkley, Dunton & Co., Tulsa, ——, 37 bls. rags.

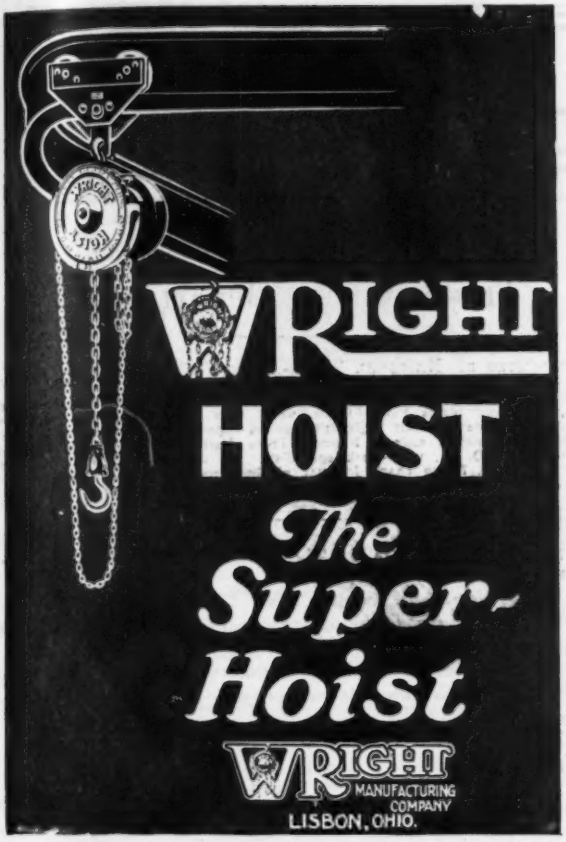
Mattagami Affairs Settled

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ontario, November 29, 1926.—After many months of litigation the affairs of the Mattagami Pulp and Paper Co., Ltd., Toronto, whose two hundred ton sulphite plant is located at Smooth Rock Falls, Ont., have been settled. The settlement, which has been subscribed to by all parties, has been ratified by Justice Middleton, Toronto.

The unsecured creditors accept from I. W. Killam, of Montreal, president of the Royal Securities Corporation, a payment of twenty-five cents on the dollar or about $300,000 in all. This was the offer in writing made by Mr. Killam, who some time ago purchased the assets of the company for $7,250,000, which was before litigation started.

The settlement does away with the Master-in-Chambers delivering judgment on the validity of the second debenture mortgage bonds issued to par value of $3,935,000. Including interest due, the settlement provides for recognition of these as at a value of approximately $115. The first mortgage bonds amounting to $2,500,000 will be paid in full and provision is also made for payment of the receiver's and other costs.



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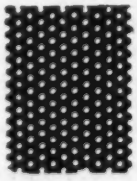

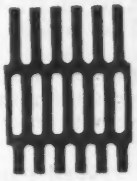

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NEW YORK OFFICE, 114 LIBERTY STREET

New York Market Review

Office of THE PAPER TRADE JOURNAL,
Wednesday, December 1, 1926.

The local paper market continued firm last week, manufacturers reporting good sales at stable prices. Business abroad is picking up, and a corresponding increased activity in buying here can be expected shortly.

Manufacturers of news print enjoyed a brisk week, with a satisfactory consumption of supplies. Boxboard also sold well. The tone of the market was strong, with prices on the fine grades of paper keeping up to level and a good demand for wrapping papers.

Mechanical Pulp

The market for ground wood continued active last week, supply and demand striking a balance. Prices held up to the quoted levels.

Chemical Pulp

The market for chemical pulp remained firm. According to reports received, Sweden has sold slightly more than half of the estimated total output of chemical pulp for 1927 at prevailing prices.

Old Rope and Bagging

The demand for old rope and bagging did not slacken during the past week, but a slight drop in price was registered.

Rags

Rags—new and old—sold at a good rate during the week. Prices were firm. There was a brisk demand for roofing rags; white stock, it was reported, enjoyed a bigger sale than colored.

Waste Paper

The sale of the better grades of waste paper was large throughout the week, and an especially good demand for shavings was reported. Prices remained at the same level, although orders coming into the market were more than the supply could handle.

Twine

Demand for twine is improving steadily and a general expansion of trade is anticipated from now until the end of the year. Prices are somewhat firmer than for some time past.

Wall Paper Output Lower Last Year

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 30, 1926.—The Department of Commerce announces that, according to data collected at the biennial census of manufacturers, 1925, the establishments engaged primarily in the manufacture of wall paper reported products valued at $30,069,005, a decrease of 13.5 per cent as compared with $34,755,700 for 1923, the last preceding census year.

Of the 49 establishments reporting for 1925, 13 were located in New York, twelve in Illinois, twelve in Pennsylvania, six in New Jersey, and the remaining six in four other States. In 1923 the industry was represented by 51 establishments, the decrease to 49 in 1925 having been the net result of a loss of four establishments and a gain of two. Of the four establishments lost to the industry, three had gone out of business prior to 1925 and one reported products at less than $5,000.

Trade Marks Department

CONDUCTED BY NATIONAL TRADE-MARK CO., WASHINGTON, D. C.

The following are trade mark applications pertinent to the paper field pending in the United States Patent Office, which have been passed for publication and are in line for early registration unless opposition is filed promptly. For further information address National Trade Mark Company, Barrister Bldg., Washington, D. C., trade-mark specialists. As an additional service feature to its readers, PAPER TRADE JOURNAL gladly offers to them an advance search free of charge on any mark they may contemplate adopting or registering.

ALL RAIL—No. 237,979. The Parker-Young Company, Portland, Me. For writing paper.

ROMA—No. 225,017. Japan Paper Company, New York City. For Italian handmade printing paper. (This mark is shown with the representation of a wolf.)

KRINX—No. 235,266. I. B. Kleinert Rubber Company, New York City. For paper fabrics adapted for skin-cleansing purposes.

DIXIES—No. 236,373. Individual Drinking Cup Co., Inc., Easton, Pa. For paper drinking cups and other containers.

BETTER RAPPIN KRAFT—No. 237,447. Dunbar & Sewell, Inc., Atlanta, Ga. For wrapping paper.

WEAVLIN—No. 237,896. The Cellulo Company, Sandusky, Ohio. For toilet paper and towel paper.

BOGEY—No. 238,074. Riverside Fibre and Paper Company, Appleton, Wis. For bristol board.

BIRDIE—No. 238,075. Riverside Fibre and Paper Company, Appleton, Wis. For bristol board.

PAR—No. 238,076. Riverside Fibre and Paper Company, Appleton, Wis. For bristol board.

Bids for Government Paper

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 30, 1926.—The Government Printing Office will receive bids on December 6 for 6,120 pounds (15,000 sheets) of 22½x28½—40S manila cardboard.

The Printing Office has received the following bids for 10,000 pounds of 25x38—100 salmon book paper: Barton, Duer & Koch Paper Company, at 7.49 cents per pound; R. P. Andrews Paper Company, 7.55 cents; Whitaker Paper Company, 7.71 cents; Mathers-Lamm Paper Company, 8.15 cents; American Writing Paper Company, 7.51 cents; Old Dominion Paper Company, 8.93 cents; Dobler & Mudge, 8 cents; Lindemeyr & Harkerm, 7.1 cents; Reese & Reese, 7.75 cents; and Bryant Paper Company, 7.5 cents.

October Paper Production Higher

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 30, 1926.—October production index for the paper industry, taking 1919 at 100 per cent, was 125, compared with 119 for September, and 118 for October of last year, according to the Department of Commerce.

WALDRON

SAND-PAPER Coating Machine

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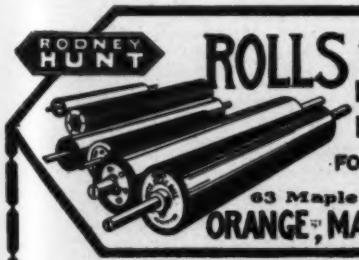

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During August, 1923, The Beveridge Paper Company, Indianapolis, had one holland type engine rebuilt into a Dayton High Speed Engine. Later on they ordered a new Dayton. After that they had us change over two more hollands. Still later, April 1925, the Beveridge people had another holland engine reconstructed.

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DAYTON
High Speed Beaters

Miscellaneous Markets

Office of THE PAPER TRADE JOURNAL,
Wednesday, December 1, 1926.

The contract movement in all of the leading paper makers' chemicals was well up to average during the last week. Some manufacturers reported an active increase in business. Buying was good and a large volume of inquiries about contract business continued to pour in.

BLANC FIXE.—The movement of both pulp and dry in the blanc fixe market held up to recent averages last week. Stocks were consumed with rapidity and manufacturers speeded up production to meet new orders. Prices remained unchanged. Pulp is quoted at $60 a ton in bulk, and the powder at 4¼ to 4½ cents a pound, in barrels, at works.

CASEIN.—The market for imported and domestic grades of casein was reported to have been a trifle firmer during the last week. Supplies were sufficient to meet the demand, and buying was good. Domestic casein sells for 14½ to 17 cents a pound, and imported from 15 to 16 cents a pound, all in bags.

BLEACHING POWDER.—No changes of great importance were reported by the manufacturers last week in the bleaching powder market. Prices were firm and shipments frequent. The powder still sells for $2 to $2.40 per 100 pounds in large drums at works, according to quantity and size of container.

CAUSTIC SODA.—The new contract prices on caustic soda were maintained last week in the majority of sales reported. Other buyers obtained supplies on the basis of contracts for the current year. Most buyers, according to reports, were looking for lower prices. The soda was generally quoted at from $3 to $3.05 per 100 pounds in large drums at works.

CHINA CLAY.—No changes of importance were reported by manufacturers of china clay last week. The tone of the market was steady and numerous inquiries were received about future business. Imported clay sells at from $13 to $22 a ton, in bulk, ship side. Domestic wash clay brings from $8 to $9 a ton, at mine, and pulverized $10 a ton.

CHLORINE.—There was no abatement last week in the steady demand for chlorine that has been typical of the market for some time. Supplies were speeded forward in good volume, and buying was good. Liquid chlorine in tanks at works sells at 4 cents a pound on contract, and from 4¼ to 4½ cents a pound spot.

ROSIN.—Sixty-thousand more barrels of rosin were consumed this year than last year, according to reports received by the manufacturers, and these sales were made although the stocks have been lower than they were the preceding year. The cool weather in the south, it is believed, will induce a greater firmness in the market. Wood rosin, which dropped 50 cents a barrel earlier in the week, came up to its recent level of $10.50 per 100 pounds in car loads, f.o.b. Southern shipping points. Gum rosin was still quoted at $13.10 to $13.50 per 280 pounds in barrels from the docks. G. grades sold at from $11.55 to $11.75 for the same amount.

SALT CAKE.—Offerings in the salt cake market were still scarce last week, though the market was considered firm. Numerous sales were transacted and buyers showed active interest in future business. Salt cake is quoted at from $18 to $20 a ton in bulk at works.

SODA ASH.—Manufacturers of soda ash continued to book numerous sales on the basis of the newly announced contract price last week, though contracts for the current year also served as a basis of transactions. Buyers, it was said, were looking for lower prices. Soda ash was generally sold for $1.17½ per 100 pounds in car lots at works; $1.32½ in bags, and $1.59½ in barrels.

STARCH.—Large shipments of starch continued to pour into the market last week, and consumers continued to buy as much as their immediate needs required. Special paper makers' grades sold at $3.42 per 100 pounds in bags, and $3.59 per 100 pounds in barrels.

SULPHATE Of ALUMINA.—The tone of the sulphate of alumina market was steady during the last week. Manufacturers reported no changes of importance. Prices held firm, and buyers inquired voluminously about contracts for the coming year. Commercial grades sold at from $1.40 to $1.45, in bags, at works, in car lots. Iron free held at from $2 to $2.05 per 100 pounds, at works.

SULPHUR.—The buyers of sulphur continued last week to inquire about future business. At the same time contract shipments moved forward at a brisk rate. Prices were good, and the general undertone of the market was encouraging. Sulphur still sells for $18 to $19 a ton, in bulk, at mine.

TALC.—The talc market remained unchanged during the last week. The market was steady and the movement against contracts was satisfactory. Domestic talc is quoted at from $16 to $18 a ton at Eastern mines. French talc sells for $18 to $20 a ton, ship side.

Crystal Tissue Mill Improvements

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, November 29, 1926.—Industrial expansion plans in Middletown have resulted in direct action to obtain more mills and factories of various descriptions, but particularly those which will utilize the by-products or the principal products of the many paper mill establishments, every line except news print being produced here.

W. O. Barnitz, president of the Oglesby and Barnitz Company's bank, and an officer of the Crystal Tissue Company, of Amanda, near Middletown, this week referred to the recent expansion of that concern as an instance of what can be done locally to provide employment to more people, increase the output and distribute the product.

Tissue papers are put to many uses and each day these uses are increasing, it seems. Human ingenuity has found it possible to utilize tissues for a thousand things which a few years ago never were thought of.

The Crystal mill now has a capacity of 55,000 pounds of tissue paper per day, the production having increased 5,000 pounds daily during the past summer by electrification of the plant.

Mr. Barnitz made known the fact that the company plans to install a sixth paper making machine early next summer, which will add twenty per cent to the present production.

Other improvements are under consideration. The company only recently added a large warehouse and installed other changes.

The Amanda plant is regarded as a Middletown industry, as it is practically in the environs of "The Paper City."

New Cameron Pump Bulletin

A new and revised edition of the Cameron Single-Stage, Double-Suction, Volute Pump Bulletin, Form No. 7059, contains information which is of great interest.

There are thousands of Cameron single-stage, double-suction pumps in daily service in almost every conceivable industry. Years of experience have produced a highly developed centrifugal pump of rugged construction, designed strictly in accordance with modern engineering theory and practice. Its high efficiency, dependable performance, and low up-keep are factors which have won it widespread popularity with the trade.

Cameron single-stage, double-suction pumps are built in three different classes, which are described in complete detail in the bulletin. They are suitable for direct connection to alternating or direct current motor, steam turbine, gasoline engine, or for belt drive.

The pump is well finished throughout. The materials used have been selected because of their eminent suitability for each particular duty. It is manufactured by the Ingersoll-Rand Company, of 11 Broadway, New York.